

IV. *Notes on the Orthoptera in the British Museum.*
 2. *The group of Calliptamini.** By B. P. UVAROV,
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[Read December 7th, 1921.]

PLATE I.

THE re-arranging of the group *Calliptamini* of the British Museum collection proved to be a very difficult task, because the only revision of this group,† though a comparatively recent one, is in many respects unsatisfactory, the whole system adopted in it being based on purely superficial characters, while a number of species are left out. A more detailed study of morphological characters and especially of the structure of the external genitalia enabled me to clear up, to a certain extent, the generic classification of the group and to establish a system which seems to be more or less natural. As this my work, however, is nothing more than an annotated list of species contained in the British Museum, and by no means a revision of the group, I did not try to study all the types in other Museums, and have left many questions, not definitely settled, for the future monographer of this extremely interesting group.

Besides the British Museum materials, I included in this paper also some species from the Hope Department, University Museum, Oxford; I am much obliged to Prof. E. B. Poulton for the loan of the specimens.

KEY TO THE GENERA.

1. (17) Supra-anal plate of the male elongato-triangular, much longer than broad. Male cerci horizontal, much longer than the supra-anal plate, strongly laminato-compressed, incurved, with a rounded apical lobe and 1-2 small teeth below it.

* See Trans. Ent. Soc. London, 1921, pp. 106-144.

† Revision y estudio del grupo *Calopteni*, par A. Martinez y Fernandez.—Anales Soc. Esp. Hist. Nat., xxx, pp. 253-309; 1902.

2. (3) Pronotum strongly constricted before the middle, with the lateral keels angulato-inflexed. . . . *Acorypha* Krauss.
3. (2) Pronotum without any constriction before the middle, with the lateral keels (when developed) more or less parallel and straight or convex.
5. (6) Body strongly depressed and coarsely rugose. Fastigium of vertex very broad, flat. Pronotum with the metazona much longer than the prozona, and the hind angle long. Prosternal tubercle in the shape of a transverse lamina, truncate at the apex. Hind femora enormously dilated, with the upper outer field strongly granose, and the upper carina strongly serrate. Male cerci with one subapical tooth. *Brachyxenia* Kirby.
6. (5) Body distinctly compressed laterally, smooth or scarcely rugose. Fastigium of the vertex narrow, more or less impressed. Pronotum with the metazona subequal to the prozona, or even shorter; its hind angle not elongate. Prosternal tubercle not laminate.
7. (14) Elytra and wings developed or only shortened.
8. (13) Male cerci with only one subapical tooth.
9. (10) Pronotum with the disc convex, lateral keels obliterate and the middle keel scarcely perceptible. Hind femora very broad and short. *Sphodromerus* Stål.
10. (9) Pronotum with the disc practically flat, the middle keel distinct and the lateral keels more or less distinct.
11. (12) Lateral keels of the pronotum irregular, feebly divergent backwards. Hind femora distinctly dilated. Hind tibiae with inner spurs subequal. *Kripa* Kirby.
12. (11) Lateral keels of pronotum straight, distinctly, or even strongly divergent backwards. Hind femora not more dilated than it is normal for the group. Hind tibiae with the lower inner spur much longer than the upper one.
Caloptenopsis Bal.
13. (8) Male cerci with two subapical teeth. Disc of the pronotum practically flat, all three keels distinct, the lateral ones straight, somewhat divergent backwards. Inner spurs of the hind tibiae subequal to each other. . *Calliptamus* Serv.
14. (7) Elytra lateral, wings not developed.
15. (16) Frontal ridge flat. Pronotum very obtusely emarginate behind. *Paracaloptenus* Bol.
16. (15) Frontal ridge sulcate. Pronotum obtusangulate behind.
Peripolus M. Fern.
17. (1) Supra-anal plate of the male broad, transverse, or scarcely longer than broad; its hind margin truncate, or rotundato-

truncate with a small projection in the middle. Male cerci oblique, or vertical, of very different shape, but never armed with a tooth near the apex.

18. (41) Pronotum not constricted before the middle, with the median keel not or moderately elevated.
19. (40) Median keel of the pronotum distinct; lateral keels more or less distinct.
20. (39) Male cerci oblique or vertical, hook-shaped, or recurved or foliaceous, always many times as long as broad, never denticulate on the lower margin.
21. (38) Elytra and wings developed, or simply shortened; male cerci not foliaceous.
22. (33) Male cerci vertical, hook-shaped.
23. (28) Male supra-anal plate with a transverse row of four chitinous tubercles about its middle.
24. (27) Hind femora strongly incrassate, especially in the male; their lower carina practically straight from the base up to beyond the middle, where it is obtusangularly bent. Hind tibiae in the male distinctly curved. Prosternal tubercle conical or narrowed towards the obtuse apex.
25. (26) Elytra and wings shortened; the wings coloured. Male cerci compressed laterally and dilated towards the apex.
Amblyphymus, gen. nov.
26. (25) Elytra and wings fully developed; the wings not coloured. Male cerci not compressed laterally and slightly thickened at the apex. *Rhachitopis*, gen. nov.
27. (24) Hind femora not incrassate, even in the male; their lower carina regularly convex. Hind tibiae in the male straight. Prosternal tubercle widened towards the emarginate apex. Male cerci not compressed laterally. Pronotum with at least one pair of small round tubercles between the transverse sulci. *Platyphymus* gen. nov.
28. (23) Male supra-anal plate with only a pair of submedian tubercles.
29. (32) Lateral keels of the pronotum straight or practically so, with the transverse sulci, cutting them, very fine. Hind angle of the pronotum obtuse, its sides not emarginate. Prosternal tubercle with the apex truncate, or emarginate.
30. (31) Male cerci compressed laterally, with the apex obliquely truncate. Male supra-anal plate transverse, with the sides bisinuate and the hind angles attenuate. Wings faintly coloured. *Calliptamicus* gen. nov.
31. (30) Male cerci not compressed laterally, with the apex obtusely conical, thickened basally. Male supra-anal plate quad-

angular, with the sides and hind angles perfectly straight. Wings hyaline. *Platacanthoides* Kirby.

32. (29) Lateral keels of the pronotum deeply cut by the transverse sulci and, therefore, sinuate. Hind angle of the pronotum attenuate, sharp, with the sides emarginate. Prosternal tubercle with the apex obtusely rounded.

Martinczius, gen. nov.

33. (22) Male cerci oblique, recurved, but not hook-shaped.

34. (35) Smooth. Median keel of pronotum linear, in profile straight, scarcely cut by the transverse sulci. Lateral keels linear, practically straight, not sinuate. Supra-anal plate of the male without chitinous tubercles or with but a pair of scarcely distinct submedian tubercles. Prosternal tubercle obtusely conical. *Calliptamulus*, gen. nov.

35. (34) Strongly rugulose and tuberculate (remining some members of *Oedipodini*). Median keel of pronotum raised, in profile crested, deeply dissected by the transverse sulci. Lateral keels strongly sinuate, or interrupted.

36. (37) Prosternal tubercle conical. Lateral keels of pronotum deeply cut by the transverse sulci and sinuate, but complete. Supra-anal plate of the male with a pair of submedian carinulae, instead of tubercles.

Brachyphymus, gen. nov.

37. (36) Prosternal tubercle quadrate, truncate at the apex. Lateral keels of pronotum in the shape of a row of interrupted carinulae and tubercles. Supra-anal plate of the male with two submedian tubercles. . . . *Euryphymus* Stål.

38. (21) Elytra lateral; their pre-radial field strongly dilated and emarginate behind. Wings not developed. Male cerci foliaceous. Prosternal tubercle with the apex pointed, attenuate. *Acrophymus*, gen. nov.

39. (20) Male cerci oblique, about twice as long as broad, elongato-triangular, hollowed out from the inner side, with the lower margin bearing several teeth. Supra-anal plate of the male rounded with a pair of fairly large tubercles at the outer basal angles and a row of four tubercles about the middle. Prosternal tubercle truncate.

Ancryphymus, gen. nov.

40. (19) Median keel of the pronotum very feeble; lateral keels obliterate. Head and pronotum strongly rugose. Wings coloured. *Plegmapterus* M. Fern.

41. (18) Pronotum constricted before the middle and strongly compressed laterally; median keel very high, teetiform, bidentate in prozona, convex in metazona. Lateral keels

faintly indicated in the metazona only. Wings coloured basally and strongly infumate in the rest. Prosternal tubercle thick, obtuse. . . . *Pachyphymus*, gen. nov.

The genus *Acoryphella*, Giglio-Tos (with two species in it, *A. zonata* G.-T. and *A. punctata* G.-T.) is not included in the key, as it has been described by the female sex only, and its exact relationship is impossible to determine without studying the types.

Genus BRACHYXENIA Kirby.

1914. *Brachyxenia* Kirby, Fauna Brit. India, Acrid., pp. 195, 256.

This curious genus reminds us in its habitus of an *Eremobiiin* rather than of a member of *Calliptamini*; but the structure of the prosternum and especially that of the male cerci, which are of the same type as in *Caloptenopsis*, leaves no doubt as to its proper systematic position.

1. *Brachyxenia scutifera* (Walk.).

1870. *Caloptenus scutifer* Walker, Cat. Derm. Salt. B. M., iv, pp. 701, 704, no. 56.

1910. *[Calliptamus] (? ?) scutifer* Kirby, Syn. Cat. Orth., iii, p. 553, no. 7.

1914. *Brachyxenia scutifera* Kirby, Fauna Brit. India, Acrid., p. 256, no. 315, fig. 136.

British Museum specimens: S. Hindostan, 1 ♀ (*Walker's type*); S. India, 1 ♀. In the Hope Museum, Oxford, I have seen 1 ♂ and 1 ♀ of this species from Madras.

Genus SPHODROMERUS Stal.

This genus is as yet very badly known, and a revision of its species appears not to be possible until more material were studied. The majority of the known species are described by their coloration only, and one may presume that the coloration in this genus is as inconstant as it is in *Calliptamus*. The genus is confined to the Eremian subregion of the Palaearctic region, and the number of undescribed species is, probably, not a small one.

1. *Sphodromerus serapis* (Serv.).

1839. *Calliptamus serapis* Serville, Ins. Orth., p. 689, no. 2.
 1870. *Caloptenus scriptipennis* Walker, Cat. Derm. Salt. B. M., iv, p. 686, no. 24.
 ? 1893. *Caloptenus sacer* Giglio-Tos, Boll. Mus. Torino, viii (164), p. 10, no. 52, fig. 1.
 1902. *S[phodromerus] serapis* Jacobson and Bianchi, Orth. and Pseudon. Russ. Emp., pp. 204, 316.
 1902. *S[phodromerus serapis]* M. Fernandez, An. Soc. Esp. Hist. Nat., xxx, p. 280.
 1910. *S[phodromerus] serapis* Kirby, Syn. Cat. Orth., iii, p. 548, no. 1.
 1910. *S[phodromerus] sacer* Kirby, l.c., p. 549, no. 2.

Though the type of *C. scriptipennis* is lost, its description leaves no doubt that it is conspecific with *C. serapis*, as is, also, probably *C. sacer*.

C. serapis seems to be a rather widely distributed species, occurring all over the Eremian subregion, from Algeria to Transcaspia (cf. Uvarov, Horae Soc. Ent. Ross., xl, no. 3, 1912, p. 31).

British Museum specimen: "Midian," 1 ♀.

2. *Sphodromerus pilipes* (Jans.).

1891. *Caloptenus pilipes* Janson, Hart, Fauna and Flora of Sinai, pp. 183, 185, fig. 4.
 1910. *S[phodromerus] pilipes* Kirby, Syn. Cat. Orth., iii, p. 549, no. 9.

This species is scarcely distinct, save by the coloration, from *C. serapis*, but I prefer to keep it separately until further materials will be studied.

British Museum specimen: Ghôr-es-Safiah, Palestine (*Janson's type*).

3. *Sphodromerus decoloratus* (?) Finot.

1894. *Sphodromerus decoloratus* Finot, Bull. Soc. Ent. France, lxiii, p. xiii, no. 3.
 1896. *Sphodromerus decoloratus* Finot, Ann. Soc. Ent. France, xliv, p. 548.
 1910. *S[phodromerus] decoloratus* Kirby, Syn. Cat. Orth., iii, p. 549, no. 4.

This species, again, is very close to *S. scrapis* and may be conspecific with it. The only specimen in the British Museum collection is somewhat smaller than it is given in the original description, and I am, therefore, not quite sure in my identification.

British Museum specimen: Biskra, Algeria, 7 ii. 1895, 1 ♀.

4. *Sphodromerus sanguiferus* Rehn.

1901. *Sphodromerus sanguiferus*, Proc. Acad. Nat. Scien. Philad., liii, p. 379.

1910. *S[phodromerus] sanguiferus* Kirby, Syn. Cat. Orth., iii, p. 549, no. 7.

Though Rehn does not mention in his description the coloration of the wings, I do not doubt that two females before me, which have the wings rose with the veins in the fore part brown, belong to his species. Dimensions of the female, which has not been known hitherto, are as follows:—

Length of body	.	.	.	.	.	29 mm.
„ „ pronotum	.	.	.	.	.	9
„ „ hind femur	.	.	.	.	.	18.5
„ „ elytra	.	.	.	.	.	12.5

British Museum specimens: Somaliland (*J. W. Bury*), 1 ♀; Somali (*Miss P. Gillet*), 1 ♀.

To the genus *Sphodromerus* belong also the following three species, known to me by their descriptions only:—

5. *Sphodromerus cruentatus* Krauss.

1902. *S[phodromerus] cruentatus* Krauss, Verh. zool.-bot. Ges. Wien, lii, p. 247, no. 28.

1910. *S[phodromerus] cruentatus* Kirby, Syn. Cat. Orth., iii, p. 549, no. 5.

Described from Oued Nsa, Algerian Sahara.

6. *Sphodromerus inconspicuus* Schult.

1894. *Sph[odromerus] inconspicuus* Schulthess-Rechberg, Zool. Jahrb., Syst., viii, p. 78.

1910. *S[phodromerus] inconspicuus* Kirby, Syn. Cat. Orth., iii, p. 549, no. 6.

I am not quite sure whether this species is not identical with *S. sanguiferus*, Rehn, both having been described from Somaliland.

7. *Sphodromerus pantherinus* Krauss.

1902. *Sphodromerus pantherinus* Krauss, Anz. Akad. Wiss. Wien, no. vii, p. 3.
 1907. *Sph[odromerus] pantherinus* Krauss, Denkschr. Mat.-Nat. Kl. K. Akad. Wiss. Wien, lxxi, p. 13 (of separate copy), no. 19, pl. i, fig. 8.

This species, described from Makalla, S. Arabia, is omitted in Kirby's Catalogue.

Genus *KRIPA* Kirby.

1914. *Kripa* Kirby, Fauna Brit. India, Acrid., pp. 195, 257.

This genus, as yet very insufficiently known, seems to be most closely related to *Sphodromerus*, the principal difference between these two genera being in the grade of development of the lateral pronotal carinae, which in *Kripa* are well indicated, though punctured and irregular, while in *Sphodromerus* they are not all or but scarcely perceptible, and the pronotum is, therefore, rounded. Some other distinctive features may be, also, looked for in the male external genitalia, but unfortunately, the male of the type species of *Kripa* (that is, *K. undulata* Kirby) is unknown, and, on the other hand, I have no males of any *Sphodromerus* before me. In its habitus *Kripa* is very like *Calliptamus*, owing to the developed pronotal keels and to the hind femora less dilated than in *Sphodromerus*. It differs from *Calliptamus*, however, by the irregular pronotal keels and also (if I am correct in placing *C. coelesyriensis* in *Kripa*) by the structure of the male cerci, which in *Calliptamus* are armed with two subapical teeth, while in *Kripa* by one only, as is the case also with *Caloptenopsis* and *Brachyxenia*.

I refer to the genus *Kripa*, which seems to be peculiar to the deserts of S.W. Asia, besides the genotype, also *Caloptenus coelesyriensis*, Gig.-Tos; it is possible that some of Walker's species described from Sinai and Arabia, and the types of which are lost, belongs also here; *Cal-*

liptamus bimaculatus, Krauss (Anz. Akad. Wiss. Wien, 1902, no. 7, p. 4) from Sokotra is also likely to be a *Kripa*.

1. *Kripa undulata* Kirby.

1914. *Kripa undulata* Kirby, Fauna Brit. India, Acrid., p. 257, no. 316, fig. 137.

British Museum specimen: Campbellpur, Punjab, 1 ♀ (*Kirby's type*).

2. *Kripa coelesyriensis* (Giglio-Tos.).

(Plate I, fig. 2.)

1893. *Caloptenus coelesyriensis* Giglio-Tos, Boll. Mus. Torino, viii (164), p. 10, no. 51, fig. 4.

1902. *C[aloptenus] coelesyriensis* M. Fernandez, Anal. Soc. Esp. Hist. Nat., xxx, p. 296.

1902. *C[alliptamus] coelesyriensis* Jacobson and Bianchi, Orth. Pseudon. Russ. Empire, pp. 205, 317.

1910. *S[phodromerus] coelesyriensis* Kirby, Syn. Cat. Orth., iii, p. 549, no. 3.

1914. *Calliptamus italicus* L. ab. *carbonaria*, Uvarov, Rev. Russe d'Entom, xiv, p. 226.

1921. *Sphodromerus coelesyriensis* Uvarov, Journ. Bombay Nat. Hist. Soc., xxviii (in print).

Both my description of *carbonaria* and the original one of *coelesyriensis* are based upon very dark, almost black coloured specimens, which is, however, not a specific character, since I had the opportunity of studying long series of specimens from Ordubad, Transcaucasia (in the Caucasian Museum, Tiflis), as well as of making observations on living insects at the same locality. The general coloration of insect varies from pitch-black to ochraceous, and the specimens of the latter coloration are very much like *K. undulata*. I should even not hesitate to regard *K. undulata* as conspecific with *K. coelesyriensis*, but the material on both species now before me is too scanty to draw a definite conclusion from it, and I should not like to rely on memory. The only character separating ochraceous coloured specimens of *K. coelesyriensis* from *K. undulata* is, as far as I can recollect, the coloration of hind tibiae, which are bright red in *undulata* and sanguineous in the other species.

K. coelesyriensis is known to occur in Syria, Mesopotamia, Persia and Ferghana in Turkestan; its occurrence in the northern parts of Punjab, whence *K. undulata* is known, would be only quite natural, which speaks in favour of the identity of both species.

British Museum specimen: 40 miles around Aleppo, Syria, iv-vii. 1919 (*F. G. Aldous*).

Genus CALOPTENOPSIS I. Bol.

The identification of species of this genus is very difficult and uncertain, since the majority of species have been based on the colour characters which, in my opinion, are of but very little use in the whole group *Calliptamini*. At the same time, the study of certain species, represented by more or less extensive series of specimens, enables me to state definitely that they are not less variable (not in coloration only, but in certain morphological features, as well), than the *C. italicus* is. In some cases it is quite possible to ascertain the conspecificity of two or three "different" species by descriptions even, while often the descriptions are so insufficient that the species in question is simply unrecognisable without a study of the type. As I do not consider this paper as a complete revision of the group, I did not attempt a study of the types of all described species; but even going by descriptions I am able to reduce the number of species by a not inconsiderable figure, and I am sure that further studies, based on types and on long series of specimens, will result in a still more appreciable reduction in the number of species, while only few new ones may be also expected.

1. *Caloptenopsis insignis* (Walk.).

1870. *Caloptenus insignis* Walker, Cat. Derm. Salt. B. M., iv, p. 701, no. 52.

1870. *Caloptenus clarus* Walker, l.c., p. 711, no. 70.

1871. *Caloptenus spissus* Walker, l.c., v, Suppl., p. 70.

1898. *Caloptenopsis saussurei* M. Fernandez, Act. Soc. Esp. Hist. Nat., ser. ii, v, p. 11.

1902. *C[aloptenopsis] saussurci* M. Fernandez, Ann. Soc. Esp. Hist. Nat., xxx, pp. 282, 290.

1910. *C[aloptenopsis] insignis* Kirby, Syn. Cat. Orth., iii, p. 551, no. 18.

1910. *C[aloptenopsis] clarus* Kirby, l.c., p. 551, no. 20.

1914. *Caloptenopsis insignis* Kirby, Fauna Brit. India, Aer., p. 258, no. 317.
 1918. *Caloptenopsis saussurei* I. Bolivar, Rev. R. Acad., Cien. Madrid, xvi, p. 409, no. 99.

The above synonymy has been established by me by the comparison of the actual types of three of Walker's species with a specimen in the British Museum received from Saussure under the manuscript name *Caloptenus femoratus* Sauss.; as M. Fernandez described his *C. saussurei* from the specimen also received from Saussure as *C. femoratus* Sauss., the identity of *C. insignis-clarus-spissus* with *C. saussurei* is beyond any doubt.

British Museum specimens: Hindostan (?), 1 ♀ (*Walker's type of C. insignis*); without locality, 2 ♀♀ (*Walker's types of C. clarus and C. spissus*; Walker records them in his descriptions as males, which is wrong); "Indes orient.," 1 ♀ (*labelled by Saussure as C. femoratus Sauss.*); 4 ♀♀ from India, without more precise labels (*Maxwell-Lefroy*).

2. *Caloptenopsis glaucopsis* (Walk.).

1870. *Caloptenus glaucopsis* Walker, Cat. Derm. Salt. B. M., iv, p. 702, no. 53.
 1870. *Caloptenus liturifer* Walker, l.c., p. 703, no. 54.
 1898. *Caloptenopsis crassiusculus* M. Fernandez, Act. Soc. Esp. Hist. Nat., ser. ii, v, p. 11.
 1902. *C[aloptenopsis] crassiusculus* I. Bolivar, Ann. Soc. Ent. Fr., lxx, p. 628, pl. 9, fig. 38.
 1902. *C[aloptenopsis] crassiusculus* M. Fernandez, Ann. Soc. Esp. Hist. Nat., xxx, pp. 282, 284-286.
 1910. *E[wryphymus] glaucopsis* Kirby, Syn. Cat. Orth., iii, p. 547, no. 28.
 1910. *C[aloptenopsis] liturifer* Kirby, l.c., p. 551, no. 17.
 1910. *C[aloptenopsis] crassiusculus* Kirby, l.c., p. 551, no. 19.
 1914. *Caloptenopsis glaucopsis* (*sic!*) Kirby, Fauna Brit. India, Aer., pp. 258, 259, no. 318.
 1914. *Caloptenopsis liturifer* Kirby, l.c., pp. 258, 259, no. 319.
 1918. *Caloptenopsis glaucopsis* I. Bolivar, Rev. R. Acad. Cien., xvi, pp. 409, 410, no. 100.
 1918. *Caloptenopsis liturifer* I. Bolivar, l.c., p. 410, no. 101.

The synonymy of the two of Walker's species is obvious when the types are compared; all further synonyms are also beyond doubt and their origin is due entirely to the fact that descriptions were made without any comparison with previously known species, as well as to the variability of the species, which is not quite constant in its characters, though in a far less degree than *C. italicus* is.

British Museum specimens: North Hindostan, 1 ♀ (*Walker's type of C. glaucopsis*); South Hindostan, 2 ♀♀ (*Walker's types of C. liturifer*); Baltistan, 2 ♂♂, 5 ♀♀; Ahmednajarbet, India, 1 ♀; Karachi, 1 ♀; Koilpati, Madras, 20 vii. 1907, 1 ♂; Africa (*Dr. F. Ostwald*), 1 ♂, 1 ♀.

3. *Caloptenopsis pallidicornis* (Stål.).

1876. *C[alliptenus] pallidicornis* Stål, Öfv. Vet. Akad. Förhand., xxxiii, 3, p. 43, no. 1.
 1902. *C[aloptenopsis] pallidicornis* M. Fernandez, Ann. Soc. Esp. Hist. Nat., xxx, pp. 282, 286.
 1902. *Caloptenopsis fratercula* Kirby, Trans. Ent. Soc. Lond., p. 111, no. 120.
 1902. *Caloptenopsis uniformis* Kirby, l.c., p. 112, no. 121.
 1910. *C[aloptenopsis] fratercula* Kirby, Syn. Cat. Orth., iii, p. 550, no. 5.
 1910. *C[aloptenopsis] uniformis* Kirby, l.c., p. 550, no. 6.

This is a species which seems to be pretty constant in its size and morphological characters, though rather variable in the coloration. Both Kirby's species represent mere colour forms.

British Museum specimens: Cape Colony (*Miss J. Brincker*), 1 ♀; Pretoria (*W. L. Distant*), numerous specimens of both sexes (*Kirby's types of C. uniformis and C. fratercula*); Salisbury, Mashonaland (*G. A. K. Marshall*), 3 ♂♂, 4 ♀♀; Nyasaland, 1 ♀; N. Johnston, 1 ♀; Brit. Centr. Africa (*A. R. Andrew*), 1 ♀.

C. pallidicornis is confined in its distribution to South Africa.

4. *Caloptenopsis meruensis* (Sjöstedt.).

1909. *Calliptamus meruensis*, Sjöstedt, Wiss. Erg. Kilim.-Meru Exped., 17. Orth., 7. Acrid., pp. 185, 192, pl. 7, fig. 16.

This species is very much alike in its habitus to *C. palli-*

dicornis Stål, but easily separated from it by the broader fastigium of the vertex, as well as by the coloration of wings and hind femora.

British Museum specimens: East of Victoria Nyanza, Africa (*Dr. F. Ostwald*), 1 ♂, 1 ♀ (taken in copula).

5. *Caloptenopsis unicarinatus* (Krauss).

1877. *C[aloptenus] unicarinatus* Krauss, Sitzb. Akad. Wiss. Wien., lxxvi (1), p. 37, no. 1.
 1893. *Euryphymus marginipennis* Karsch, Berl. Ent. Ztschr., xxxviii, pp. 103, 104, no. 71.
 1902. *Euryphymus marginipennis* M. Fernandez, An. Soc. Esp. Hist. Nat., pp. 306, 307.
 1902. [*Caloptenopsis?*] *marginipennis* M. Fernandez, l.c., p. 308, no. 15.
 1910. *E[uryphymus] unicarinatus* Kirby, Syn. Cat. Orth., iii, p. 547, no. 19.
 1910. *E[uryphymus] marginipennis* Kirby, l.c., p. 547, no. 24.

The species is easily recognised by the lateral carinae almost obliterate, punctured throughout, even in the prozona.

British Museum specimens: Amantin, Ashanti, Gold Coast (*J. J. Simpson*), 1 ♂; Sonkonja, Sierra Leone (*J. J. Simpson*), 1 ♂.

6. *Caloptenopsis mossambicus* (Brancs.).

1893. *Caloptenus mossambicus* Brancsik, Jahresh. Naturwiss. Ver. Trencs. Comit., xv-xvi, p. 194, pl. xii, fig. 4.
 1896. *Caloptenopsis angusticosta* Karsch, Stett. Ent. Zeit. lvii, p. 321, no. 86, fig. 37.
 1902. *C[aloptenopsis] mossambicus* M. Fernandez, An. Soc. Esp. Hist. Nat., xxx, pp. 282, 288.
 1902. *C[aloptenopsis] angusticosta* M. Fernandez, l.c., pp. 282, 293.
 1902. *Calliptamus tibialis* Kirby, Trans. Ent. Soc. Lond., p. 110, no. 119.
 1909. *Caloptenopsis speciosa* Sjöstedt, Wiss. Erg. Kilim.-Meru Exped., 17. Orth., 7. Acrid., pp. 185, 193, pl. 7, fig. 17.

1910. *C[aloptenopsis] tibialis* Kirby, Syn. Cat. Orth., iii, p. 550, no. 7 (*syn. excl.*!).
1910. *C[aloptenopsis] mossambicus* Kirby, l.c., p. 550, no. 10.
1910. *C[aloptenopsis] angusticosta* Kirby, l.c., p. 550, no. 13.

Though the above synonymy is based almost entirely on the descriptions, as I had no types before me besides the species described by Kirby, I feel quite sure that it is correct, and the different "species" represent only colour forms. There are two principal forms, corresponding to those of *Calliptamus italicus* L.: the one is rather pale, spotted with grey, and the other is much darker, with very distinct pale lateral longitudinal fasciae on the upper-side (*angusticosta* Karsch, which corresponds to *C. italicus* var. *marginellus* Serv.). The hind tibiae in the spotted form are red or yellowish, in the fasciate form they are wax-yellow.

British Museum specimens: Pretoria (*W. L. Distant*), 6 ♀♀, 1 ♂; Africa (*W. L. Distant*), 1 ♀; Pemba Island, 1 ♀; Warm Baths, Waterberg, 1 ♀; Zomba, Brit. Centr. Afr. (*P. Rendall*), 1 ♀; Zomba, Feb.-March 1896 (*A. Whyte*) (*all these are Kirby's types of C. tibialis*); Salisbury, Mashonaland (*G. A. K. Marshall*), 1 ♀; Mt. Chirinda, Gazaland (*G. A. K. Marshall*), 2 ♂♂, 1 ♀; Zimbiti, E. Africa (*P. A. Sheppard*), 1 ♂, 1 ♀.

7. *Caloptenopsis ferrifer* (Walk.).

1870. *Caloptenus ferrifer* Walker, Cat. Derm. Salt. B. M., iv, pp. 690, 698, no. 46.
1889. *C[aloptenus] nigrovariegatus* I. Bolivar, Jorn. Sci. Lisboa, seg. ser., i, p. 171, no. 174.
1896. *Caloptenopsis laticosta* Karsch, Stett. Ent. Zeit., lvii, p. 322, no. 87.
1902. *C[aloptenopsis] nigrovariegatus* M. Fernandez, An. Soc. Esp. Hist. Natur., xxx, pp. 282, 289.
1902. *C[aloptenopsis] laticosta* M. Fernandez, l.c., pp. 282, 294.
1902. *Caloptenopsis johnstoni* Kirby, Proc. Zool. Soc. London, p. 101, no. 23.
1909. *Caloptenopsis laticosta* Sjöstedt, Wiss. Erg. Kilim.-Meru Exped., 17. Orth., 7. Acrid., pp. 185, 194.
1910. *C[aloptenopsis] ferrifer* Kirby, Syn. Cat. Orth., iii, p. 549, no. 4 (*syn. excl.*).

1910. *Caloptenopsis johnstoni* Kirby, l.c., p. 549.
 1910. *C[aloptenopsis] nigrovariegatus* Kirby, l.c., p. 550,
 no. 12.
 1910. *C[aloptenopsis] laticosta* Kirby, l.c., p. 550, no. 14.

This species is very easily recognisable by the peculiar shape of the frontal ridge and vertex (see Karsch's description of *C. laticosta*), and it is very astonishing that it has been redescribed so many times under different names. The species varies considerably in its size, and Kirby's types of *C. johnstoni* are rather small, but there is no doubt that they are conspecific with *C. ferrifer* Walk., the type of which is also before me now, as well as with the fairly well-described *C. nigrovariegatus* Bol. and *C. laticosta* Karsch. It is very difficult to understand why Kirby considered *C. pallidicornis*, which is a quite different insect, as conspecific with *C. ferrifer*.

British Museum specimens: S. Africa, 1 ♂ (*Walker's type of C. ferrifer*); Baringo, 4000 ft. (*H. H. Johnston*), 3 ♂♂, 4 ♀♀ (*Kirby's types of C. johnstoni*); Zomba, 2000-3000 ft., 5 ♂♂, 1 ♀; Nyasaland (*A. Whyte*), 1 ♀; Zomba (*P. Renhall*), 1 ♀ (named by W. Kirby as *C. tibialis* Kirby); Mwera, Mabira Forest and Entebbe, Uganda (*C. C. Gowley*), 3 ♀♀; Kilimandjaro, 3000-5000 ft., 1 ♀.

8. *Caloptenopsis macracanthus* M. Fern.

- ||1889. *C[aloptenus] calcaratus* I. Bolivar, *Jorn. Sci. Lisboa*, seg. ser., i, p. 172, no. 175 (*nec Stål, 1876!*).
 1902. *C[aloptenopsis] macracanthus* M. Fernandez, *An. Soc. Esp. Hist. Natur.*, xxx, pp. 282, 287 (published June, 1902).
 1902. *Calliptamus tibialis* Kirby, *Trans. Ent. Soc. Lond.*, p. 110, no. 119 (*partim!*).
 1902. *Caloptenopsis femoralis* Kirby, *Ann. Mag. Nat. Hist.*, vol. 10, no. 57, p. 241, no. 5 (published September, 1902).
 1910. *C[aloptenopsis] femoralis* Kirby, *Syn. Cat. Orth.*, iii, p. 550.
 1910. *C[aloptenopsis] macracanthus* Kirby, l.c., iii, p. 550, no. 9.

This species is rather closely related to the *C. ferrifer* Walk., but is easily distinguished from it by the much longer metazona of the pronotum.

British Museum specimens: Pretoria (W. L. Distant), 2 ♀♀. (Kirby's type of *C. femoralis*, and one of his types of *C. tibialis*).

9. *Caloptenopsis calcaratus* (Stål.).

1876. *C[alliptenus] calcaratus*, Stål, Bih. Sven. Vet.-Akad. Handl., iv (5), p. 13, no. 3.
 1898. *C[aloptenus] orientalis* Schulthess, Ann. Mus. Genova xxxix, p. 194, no. 1.
 1902. *C[aloptenopsis] calcaratus* M. Fernandez, An. Soc. Esp. Hist. Nat., xxx, pp. 282, 287.
 1902. *C[aloptenopsis] orientalis* M. Fernandez, l.c., pp. 282, 292.
 1902. *Calliptamus pachypus* Krauss, Anz. Akad. Wiss. Wien, vii, p. 5, no. 15.
 1907. *C[alliptamus] pachypus* Krauss, Denkschr. Mat.-Nat. Kl. Akad. Wiss. Wien, lxxi, p. 24 (of a separate copy), pl. ii, fig. 7, 7A.
 1910. *C[aloptenopsis] calcaratus* Kirby, Syn. Cat. Orth., iii, p. 550, no. 8.
 1910. *C[aloptenopsis] orientalis* Kirby, l.c., p. 550, no. 11.

British Museum specimens: Socotra, 3 ♂♂, 4 ♀♀.

10. *Caloptenopsis decisus* (Walk.).

1870. *Caloptenus decisus*, Walker, Cat. Derm. Salt. B. M., iv, p. 700, no. 51.
 1893. *Caloptenus baliensis* Brancsik, Jahresh. Ver. Trencs. Comit., xv-xvi, p. 195, pl. 12, fig. 5.
 1902. *C[aloptenopsis] baliensis* M. Fernandez, An. Soc. Esp. Hist. Nat., xxx, pp. 282, 292.
 1910. *C[aloptenopsis] baliensis* Kirby, Syn. Cat. Orth., iii, p. 550, no. 16.
 1910. *E[uprepocnemis] decisus* Kirby, l.c., p. 561, no. 13.
 1918. *Caloptenopsis madagascariensis* Sjöstedt, Ark. Zool., 12, no. 1, p. 16.

Walker's type of *C. decisus* agrees perfectly well with the descriptions of both *C. baliensis* and *C. madagascariensis*, and there is no doubt in my mind as to their identity.

British Museum specimen: Madagascar, 1 ♂ (*Walker's type*).

The four following species are not represented in the British Museum collection :—

11. *Caloptenopsis vittatus* (I. Bol.).

1889. *C[aloptenus] vittatus* I. Bolivar, *Jorn. Sci. Lisboa*, (2), i, p. 171, no. 173.
 1902. *C[aloptenopsis] vittatus* M. Fernandez, *An. Soc. Esp. Hist. Nat.*, xxx, pp. 282, 283.
 1910. *C[aloptenopsis] vittatus* Kirby, *Syn. Cat. Orth.*, iii, p. 549, no. 2.

It is not impossible that this species is identical with *C. mossambicus* Brancs., as its description recalls very much the colour form described by Karsch as *C. angusticosta*, but I abstain from synonymising them, because I have not seen any specimens of *C. mossambicus* from West Africa, whence the type of *C. vittatus* came.

12. *Caloptenopsis angusticeps* (I. Bol.).

1889. *C[aloptenus] angusticeps* I. Bolivar, *Jorn. Sci. Lisboa*, (2), i, p. 172, no. 176.
 1902. *C[aloptenopsis] angusticeps* M. Fernandez, *An. Soc. Esp. Hist. Nat.*, xxx, pp. 282, 283.
 1910. *C[aloptenopsis] angusticeps* Kirby, *Syn. Cat. Orth.*, iii, p. 549, no. 3.

Seems to be rather like *C. pallidicornis* Stål, but differs from it in the undeveloped lateral keels of metazona of pronotum. Probably a good species.

13. *Caloptenopsis karschi* M. Fern.

- ||1893. [*Euryphymus*] *calcaratus* Karsch (*nec* Stål), *Berl. Ent. Ztschr.*, xxxviii, p. 103, no. 70.
 1902. *Euryphymus karschi* (*nom. nov.*) M. Fern., *An. Soc. Esp. Hist. Nat.*, xxx, p. 307.
 1910. *C[aloptenopsis] karschi* Kirby, *Syn. Cat. Orth.*, iii, p. 550, no. 15.

I do not think that this insect is conspecific with any other species, though it is very insufficiently described.

14. *Caloptenopsis v-plagiatus* (Bruner).

1910. *Caloptenus* γ -*plagiatus* Bruner, *Voeltzk. Reise Ostaf.*, ii, p. 642, pl. 27, fig. 16.

Since the name given to this insect by L. Bruner is not pronounceable, I propose to alter it to *v-plagiatus* according to the description of the species: "pronotum marked on the disk of the hind lobe by a v-shaped black patch the apex of which points to the rear."

The species, which has been described from Manda Island, British East Africa, seems to be very near to, if not identical with, *C. ferrifer* Walk., differing only in the peculiar mark on the pronotum which may be a result of a reduction of the median fascia usual to *C. ferrifer*. Its description and figure are, however, quite insufficient.

The following key to the species of *Caloptenopsis* known to me (*i. e.* except *vittatus*, *angusticeps*, *karschi* and *v-plagiatus*) may be useful:

- 1 (8) The lower inner spur of the hind tibiae with the apex simply recurved, without or with but short and not dense hairs.
2. (3) Lateral keels of pronotum almost parallel, hardly divergent backwards; hind angle obtuse, rounded; metazona scarcely longer than prozona. Fastigium between the eyes distinctly broader than the frontal ridge between antennae. Wings with the base rose.—India.

C. glaucopsis Walk.

3. (2) Lateral keels of pronotum strongly divergent backwards; hind angle straight, scarcely rounded; metazona much longer than prozona.
4. (7) Fastigium between the eyes not narrower than the frontal ridge at ocellum. Hind wings with the base rose.
5. (6) Frontal ridge with the margins somewhat raised. Pronotum more elongate and its lateral keels more strongly divergent. Elytra extending well beyond hind knees. Wings with the very base tinted with light rose.—N.E. Africa. *C. calcaratus* Stål.
6. (5) Frontal ridge with the margins very obtuse. Pronotum shorter, with the lateral keels less strongly divergent. Elytra scarcely extending beyond hind knees. Wings almost wholly bright rose.—E. Africa.

C. merucensis Sjöst.

7. (4) Vertex between the eyes narrower than the frontal ridge at ocellum. Hind wings with the base bluish.

C. pallidicornis Stål.

8. (1) The lower inner spur of the hind tibiae with the apex prominent beyond the base of the claw, in the shape of an obtuse tubercle bearing dense and long hairs.

9. (12) Lateral keels of pronotum well developed, reaching its hind margin.
10. (11) Prosternal tubercle strongly cylindrical. Wings with the base rose.—India. *C. insignis* Walk.
11. (10) Prosternal tubercle distinctly compressed, with the apex transverse. Wings hyalinous.—Madagascar.
C. decisus Walk.
12. (9) Lateral keels of pronotum obliterate, at least in the metazona.
13. (18) Lateral keels of pronotum smooth in the prozona, punctured in the metazona.
14. (15) Prozona scarcely shorter than metazona. Frontal ridge much broader than the fastigium. Hind tibiae dirty-violaceous.—S.E. Africa. *C. ferriker* Walk.
15. (14) Prozona distinctly shorter than metazona.
16. (17) Metazona more than one-half again as long as the prozona. Hind tibiae dirty-violaceous.—S.E. Africa.
C. macracanthus M. Fern.
17. (16) Metazona distinctly but not much longer than prozona. Hind tibiae red or yellowish.—S.E. Africa.
C. mossambicus Brancs.
18. (13) Lateral keels of pronotum punctured throughout, almost obliterate.—W. Africa. *C. unicarinatus* Krauss.

Genus CALLIPTAMUS Serv.

There are seven species of this genus in Kirby's Catalogue (iii, p. 549-551), but three of them (*C. marmoratus* F.-W., *C. cephalotes* F.-W. and *C. discoidalis* Walk.) are conspecific with *C. italicus* L.; *C. tarsius* F.-W. is a synonym of *Euprepocnemis plorans* Charp.; and *C. scutifer* Walk. has been made by Kirby the type of a distinct genus, *Brachyzenia*. Thus, only two species remain in the genus *Calliptamus*: the common South-Palaeartic *C. italicus* L., and the Canarian *C. vulcanius* Krauss., because the two African species described more recently (*C. v-plagiatus* Brun. and *C. meruensis* Sjöst.) belong to the genus *Caloptenopsis*, and *C. abbreviatus* Ikonn. from Corea is scarcely specifically distinct from *C. italicus*, representing the form of the latter species known as var. *icterica* Serv. (= *wattenwyliana* Pant.; see H. Karny in Wiss. Erg. Exped. Filchner nach China u. Tibet, x, 1, p. 35, 1908).

The genus has an excellent character in the structure

of the male cerci, which enables me to separate it from all its nearest relatives (*Caloptenopsis*, *Paracaloptenus*, *Brachyxenia*): the cerci of *Caloptenus* are armed with *two* obtuse subapical teeth, while in other genera the cerci bear only *one* rather long and acute subapical spine (Plate I, figs. 1 and 2).

1. *Calliptamus italicus* (L.)

(Plate I, fig. 1.)

To the numerous synonyms of this species (see Kirby's Catalogue, iii, pp. 551-553) six more must be added, as follows:—

1846. *Calliptamus marmoratus* Fisch.-Waldh., Orth. Imp. Ross., p. 242, no. 5.
 1846. *Calliptamus cephalotes* Fisch.-Waldh., l.c., p. 243, no. 6 (identical with var. *icterica* Serv.).
 1870. *Caloptenus discoidalis* Walk., Cat. Derm. Salt. B. M., iv, p. 686, no. 23.
 1908. *Calliptamus ictericus* Karny, Wiss. Erg. Exped. Filchner, x, 1, p. 35.
 1913. *Calliptamus abbreviatus* Ikonnikov, Über die von P. Schmidt aus Korea mitgebrachten Acridiodeen, p. 21.
 1914. *Caloptenopsis punctata* Kirby, Fauna Brit. India, Acrid., pp. 258 and 260, no. 320, fig. 138.

The variability of this species is a well-known fact, but nobody has yet tried to undertake a serious study of its numerous forms, some of which are very striking and rather constant. As the species is so extremely common and numerous all over South Europe, it might present an excellent object for the experimental study of variations, which should be of great help to systematists. As the case stands now, it seems to me quite useless to attempt a classification of varieties based upon collection specimens only, and I prefer to take the species in its widest sense, without any subdivisions.

British Museum specimens: As the distribution of this species throughout the Mediterranean subregion is well known, I shall not give here the records of Museum specimens from that subregion. The occurrence of *C. italicus* L. in Baltistan (Kashmir) is, however, very interesting, and the more so, as the Museum collection contains several

specimens of *C. italicus* taken there, together with several specimens of *Caloptenopsis glaucopsis* Walk., which is extremely like the former species in its habitus and coloration, but, of course, easily distinguished by the shape of tibial spurs and other generic characters. One of the specimens of *C. italicus* from Baltistan is Kirby's type of *Caloptenopsis punctata*.

2. *Calliptamus vulcanius* (Krauss).

1892. *Caloptenus vulcanius* Krauss, Zool. Anz., xv, p. 167, no. 42.

1910. *C[alliptamus] vulcanius* Kirby, Syn. Cat. Orth., iii, p. 553, no. 3.

British Museum specimen: Teneriffe (Capt. Bechey), 1 ♀.

According to the original description, this species differs from *C. italicus* by the straight pronotal carinae and the coloration of wings, which are hyalinous at the base and infumate apically. The single female specimen in the Museum collection is very badly preserved, and I am unable to express any definite opinion as to the systematic value of the above-mentioned characters; the interrelation of *C. italicus* and *C. vulcanius* must be studied by long series of specimens.

Genus PARACALOPTENUS Bol.

There are two species included in this genus in Kirby's Catalogue, as well as in M. Fernandez's revision, but I am rather doubtful whether *P. obesus* Bol., known by the female sex only, really belongs here; most probably it represents a distinct genus. Thus, only one species remains in the genus, the Mediterranean *P. caloptenoides* Br. Watt.

1. *Paracaloptenus caloptenoides* (Br. Watt.).

I find it unnecessary to repeat the synonymy of this species, correctly given by Kirby (Syn. Cat. Orth., iii, p. 553).

British Museum specimens: Corfu, 1 ♂, 1 ♀ (purchased from Brunner v. Wattenwyl); Belgrade, Serbia, 1 ♀; Anninger Wald, Austria, 1 ♂.

Genus PERIPOLUS M. Fern.

1902. *Peripolus* M. Fernandez, An. Soc. Esp. Hist. Nat., pp. 258, 303.

I do not know the male of this genus, but according to the original description, its cerci and anal plate are not quite of the same type as in the preceding genera. The hind femora, also, are rather narrow for a member of the group *Calliptamini*. There is only one species known.

1. *Peripolus pedarius* (Stål).

1878. *C[alliptenus] pedarius* Stål, Bih. Sven. Akad. Handl., v. (4), p. 75, no. 1.
 1902. *P[eripolus] pedarius* M. Fernandez, An. Soc. Esp. Hist. Nat., xxx, p. 303.
 1910. *P[eripolus] pedarius* Kirby, Syn. Cat. Orth., iii, p. 554, no. 1.
 1914. *Peripolus pedarius* Kirby, Fauna Brit. India, Acrid., p. 261, no. 321.

British Museum specimen : Darjeeling, 2 ♀♀.

AMBLYPHYMUS, gen. nov.

Finely rugose, but not at all tuberculate. Antennae slightly compressed, very feebly widened beyond the basal third. Face slightly reclinate; frontal ridge in profile slightly convex; its margins straight, feebly divergent downwards, smooth; the surface flat and strongly punctured above the ocellum, impressed below the latter. Fastigium of vertex sloping, forming an obtuse, rounded angle with the frontal ridge; elongato-hexagonal, feebly impressed. Temporal foveolae rather distinct, though imperfectly marginate from below, small, triangular. Occiput with a feeble and short median carinula, with more or less developed radial rugosities behind the eyes. Eyes large, oval, distinctly higher than long and slightly higher than the subocular sulci; their fore margin slightly convex. Cheeks rugulose, with oblique sulci feeble. Pronotum not strongly compressed laterally; disc more or less convex; median keel low, but well developed, acute, in profile scarcely convex, feebly cut by the transverse sulci; the hind sulcus distinctly behind the middle; lateral keels very feeble and obtuse in the prozona, obliterate in the metazona, deeply cut by the sulci; fore margin of the disc convex; hind angle obtuse; lateral lobes a

little higher than long, with the lower margin rotundato-prominent in the middle; hind angle obtuse, rounded; fore margin sinuate. Prosternal tubercle low, conical or narrowed towards the obtuse apex. Mesosternal interspace trapezoidal, in the male almost as broad as long, in the female distinctly transverse. Elytra more or less abbreviated; wings coloured, with the fore margin dark. Hind femora strongly dilated and distinctly incrassate, especially in the male; upper carina strongly serrate; lower margin of the externomedian area straight, or nearly so; lower outer area convex, widest beyond the middle; lower carina straight from the base up to the middle or even beyond it, then convex; inner lower area dilated. Hind tibiae more or less bent.

♂. The last tergite dilated and incrassate, with a large rotundato-trapezoidal emargination. Supra-anal plate trapezoidal with the hind angles obtuse; a narrow apical lobe; a row of four tubercles about the middle; median carina low, sulcate, narrowly bifurcate basally. Cerci hook-shaped with the apical (ascending) part longer than the basal part, laterally compressed and dilated at the apex. Subgenital plate small, very obtusely conical.

♀. Subgenital plate shallowly, but distinctly impressed along its middle; hind margin very obtusely produced, with two obtuse lateral emarginations. Lower valves of the ovipositor with broadly rounded basal teeth; apical parts narrow and small.

Genotype: *Amblyphymus miniatus*, sp. n.

In the structure of genitalia, both male and female, as well as in the shape of the hind legs, this genus is closely related to *Rhachitopsis*, but differs from it in the far less rugose head and pronotum, better developed temporal foveolae, broader and less impressed fastigium of the vertex, abbreviated elytra, coloured wings, dilated at the apex male cerci and longitudinally sulcate female subgenital plate.

I know two species of this genus, both described below, and it is possible that *Euryphymus xanthocnemis* Brancs. also belongs here, but its description is practically worthless, being too short and based on the female sex only.

1. *Amblyphymus miniatus*, sp. n.

(Plate I, fig. 3.)

♂. Not large, but rather heavily built. The sides of the frontal ridge perfectly straight. Head almost smooth, but not at all shining. Pronotum not coarsely, but distinctly rugulose; disc distinctly

convex; hind margin very obtusely rotundato-angulate; lateral keels scarcely perceptible and interrupted in prozona, undeveloped in metazona; lateral lobes distinctly convex. Prosternal tubercle strongly conical, with the apex obtuse. Elytra not reaching the apex of the abdomen, strongly widened at the end of the basal third, with the apex narrowly triangular. Wings much shorter than the elytra. Hind margin of the last tergite strongly chitinised, slightly incrassate, feebly and irregularly serrulate, with a quite small prominence in the middle. Supra-anal plate broader than long; the two submedian tubercles in the shape of small, sharp carinulae, connected with each other; the lateral tubercles rather large, triangular. Cerci with the basal (descending) part somewhat thicker and about half as long as the apical part; the apical third strongly compressed laterally and dilated; the apex obliquely rotundato-truncate from behind.

General coloration brown. Face paler. Lateral lobes of the pronotum with a shining black spot, and a small pale spot below it. Elytra brown, with a few indefinite blackish spots. Wings bright red, with the fore margin blackish. Hind femora with a blackish triangular spot in the middle of the upperside, extending into the upper part of the inside; the latter dirty yellow, somewhat blackened near the apex; lower inner sulcus dirty yellow. Hind tibiae dirty yellow; spines with the apices black.

Length of body 22.5 mm.; of pronotum 6 mm.; of elytra 11 mm.; of hind femora 13.5 mm.

Dimensions of the paratypic female are as follows: Length of body 25 mm.; of pronotum 7.5 mm.; of elytra 12 mm.; of hind femora 15 mm.

The species is rather variable in its general coloration; thus one of the males from Beira is greyish-brown, with whitish and blackish spots; the hind femora are often with three blackish fasciae on the upperside and with black streaks in the lower outer sulcus. The morphological characters are, however, quite constant.

British Museum specimens: Mount Chirinda, Gaza Land, 1 iii. 1907 (*David Odendaal*), 9 ♂♂, 7 ♀♀; the same locality (*G. A. K. Marshall*), 1 ♂, 2 ♀♀; Beira, E. Africa (*G. A. Sheppard*), 3 ♂♂, 1 ♀ (*type and 22 paratypes*).

2. *Amblyphymus roseus*, sp. n.

Differs from *A. minutus* by the following characters:—More compressed laterally; scarcely rugose. Frontal ridge with margins slightly sinuate below the ocellum. Disc of pronotum less convex;

hind angle about 90°; lateral carinae in prozona low, but well distinct, in metazona obliterate; lateral lobes only feebly convex. Prosternal tubercle narrowed towards the rounded apex, but not conical. Elytra in the male extending beyond the apex of the abdomen, but not reaching the hind knee, rather hyalinous, with the apex rounded. Wings only a little shorter than the elytra. Hind femora broader, but less incrassate. Male genitalia very much the same as in *A. miniatulus*, but the emargination of last tergite is deeper and more rounded; there is no prominence on the last tergite; submedian tubercles of the supra-anal plate somewhat oblique, not connected with each other; lateral tubercles in the shape of small oblique carinulae.

General coloration dark-brown. Pronotum with two pale lateral fasciae. Elytra reddish-brown, with indefinite dark spots. Wings bright rose, with the fore margin darkened. Hind femora with three indefinite dark fasciae on the upperside, extending into the inside as well, but not reaching the lower half of the latter; the inner side dirty yellow; lower inner sulcus and the hind tibiae dirty yellow; the spines of the hind tibiae black.

In the paratypic female the elytra do not reach the apex of the abdomen.

Dimensions of the male type are as follows: Length of body (probably shrunk) 19 mm.; of pronotum 5.5 mm.; of elytra 13 mm.; of hind femur 12 mm.

Dimensions of the female paratype are: Length of body 27 mm.; of pronotum 7.5 mm.; of elytra 16 mm.; of hind femur 17 mm.

British Museum specimens: Masil nek (*W. L. Distant*), 1 ♂ (*type*; named by Kirby as *Euryphymus erythropus* Thunbg.); Pretoria, 4 iii. 1917, 1 ♀; Pretoria (*W. L. Distant*), 1 ♂ (*two latter being paratypes*).

RHACHITOPIS,* gen. nov.

Moderately rugose. Antennae very feebly compressed and scarcely dilated beyond the middle. Face vertical. Frontal ridge in profile straight, with the margins parallel, not at all, or but slightly approximate near the fastigium, with the surface more or less sulcate. Fastigium of the vertex strongly sloping, in profile convex, forming with the frontal ridge a widely rounded angle, not separated from the ridge by a transverse carina; its surface not strongly impressed; margins subparallel, sinuose before the apex because of

* = rachitic-looking, because of curved hind tibiae. It is a masculine name.

temporal foveolae, which are, however, small and very imperfectly developed and not at all marginate from below. Eyes rather prominent, oval, slightly higher than long, not higher than subocular distance. Cheeks more or less rugulose, with the oblique sulcus moderately deep. Pronotum rather compressed laterally, slightly narrowed anteriorly, more or less rugose; prozona convex; metazona, which is subequal to the prozona in length, flat; median keel feeble, sometimes scarcely perceptible; transverse sulci deep, practically straight; lateral keels indicated only by an interrupted row of feeble tubercles and carinulae, not reaching the hind margin; lateral lobes higher than long, with the lower margin straight in the hind half, rotundato-angulate, but not prominent, in the middle, and ascending in the fore half; fore angle very obtuse, rounded; hind angle a little more than 90° , rounded; hind angle of the disc about 90° , scarcely rounded. Prosternal tubercle not at all or but slightly longer than broad, more or less distinctly compressed in transverse direction, obtusely triangular, or with the apex strongly rounded, not truncate. Mesosternal interspace in the male subequal to, or slightly more narrow than, one of the lobes; in the female transverse, distinctly broader than one of the lobes. Elytra with the fore margin strongly prominent in the basal half, distinctly narrowed apically, with a rather sparse reticulation. Hind femora of the male strongly incrassate, with lower margin of the externomedian area distinctly inwardly bent; the lower outer sulcus feebly impressed and sometimes even slightly convex; lower carina from the base (where it is low and in some species even almost obliterate) up to the middle straight, strongly convex just beyond the middle, and again straight near the apex; the broadest part of the lower outer sulcus just beyond the middle; lower inner sulcus dilated, almost flat, or even slightly convex. Hind femora of the female less incrassate than those of the male; the lower carina of the externomedian area straight; lower outer sulcus less dilated, its broadest part beyond the middle; lower inner sulcus feebly dilated, scarcely concave. Hind tibiae of the male distinctly, or even strongly incurved; of the female practically or quite straight.

♂. Two last abdominal segments widened and incrassate; the hind one with a deep rotundate emargination, with the hind margin strongly chitinised, depressed. Supra-anal plate transverse; hind angles straight, or nearly so, not rounded; hind margin truncate, with a triangular lobe and small emarginations at the base of the latter; median keel feeble, sulcate throughout and bifurcate basally; a transverse row of four chitinous tubercles in the middle, and one tubercle at the base of the median sulcus. Cerci hook-shaped, vertical, with the apical (ascending) part longer than the basal one,

and prominent above the supra-anal plate, not acuminate apically. Subgenital plate small, very obtuse.

♀. Subgenital plate with a feeble, but distinct, convex transverse sulcus beyond the middle; the apex broadly triangular. Lower valves of the ovipositor with broad rounded teeth and small, narrow apical parts.

Genotype: *Caloptenus crassus* Walk.

It is a very well-defined genus, easily recognised by the hooked male cerci, incrassate hind femora, curved hind tibiae and the prosternal tubercle not truncate but either triangular, or with the apex strongly rounded. The following species, known to me by specimens, belong here: *crassus* Walk., *ceraseus*, sp. n., and *nigripes*, sp. n. From the species previously described by different authors under *Caloptenus* and *Euryphymus* the following ones (unknown to me save by descriptions) should be also included into *Rhachitopis*: *melanopus* Burm., *saphiripes* Serv., *curvipes* Stål, *vylderi* Stål (?), *adpersus* Bol., *stolidus* Bol. As the majority of species are not known to me, I will not attempt to draw a key to species, and proceed to describe those in the British Museum collection.

1. *Rhachitopis crassus* (Walk.).

1870. *Caloptenus crassus* Walker, Cat. Derm. Salt. B. M., iv, pp. 690, 694, no. 39 (*partim*!).

1910. *E[uryphymus] crassus* Kirby, Syn. Cat. Orth., iii, p. 547, no. 17 (*syn. excl.*!).

C. illepidus Walk. (= *pinguis* Walk.), which has been regarded by Kirby as conspecific with *crassus*, is really not even congeneric with it and belongs to the new genus *Platyphymus* (see below). The specimens labelled by Kirby as the types of *C. crassus* Walk. belong to two distinct species, and I have selected one male as the holotype of *crassus*, while the second species is described below as *nigripes*, sp. n. A supplementary description of *crassus*, should be, I believe, useful; it is as follows:—

Head moderately, pronotum distinctly rugose. Median keel of pronotum between sulci very low, not higher than the tubercles on the disc between sulci; lateral keels scarcely distinct in prozona, none in metazona; metazona longitudinally rugulose. Lateral lobes with a whitish callous spot in the middle and a shining black

spot above it. Supra-anal plate of the male with the outer margins slightly convex, and the hind angles somewhat rounded, with four tubercles in a transverse row and a tubercle in the basal sulcus. Male cerci with the ascending part very feebly bent forward, equally wide all along, obtusely truncate at the apex, a little more than twice as long as the basal (descending) part.

Dimensions of the type are as follows: Length of body 19 mm.; of pronotum 5 mm.; of elytra 14.5 mm.; of hind femur 12 mm.

Dimensions of one of paratypic females are: Length of body 22.5 mm.; of pronotum 5.5 mm.; of elytra 16 mm.; of hind femur 12.5 mm.

British Museum specimens: South Africa (*A. Smith*), 2 ♂♂, 4 ♀♀ (*Walker's types*).

2. *Rhachitopis nigripes*, sp. n.

1870. *Caloptenus crassus* Walker, Cat. Derm. Salt. B. M., iv, p. 694, no. 39, f.

♂. Somewhat larger than *R. crassus* Walk., moderately rugose. Frontal ridge parallel-sided, sulcate throughout, but obliterate just before the clypeus. Fastigium of vertex about twice as broad as the frontal ridge, very feebly impressed. Median keel of pronotum feeble, especially so between the sulci; lateral keels feeble, but subobliterate between the sulci only, almost reaching the hind margin of the pronotum; disc feebly rugose; tubercles between the sulci small; metazona with but a few small, scattered tubercles. The last abdominal segment obtusangularly excised, the sides of the emargination slightly sinuate. Supra-anal plate trapezoidal; outer margins straight; hind angles a little more than 90°, not rounded; median keel low and broad, widely bifurcate in the basal half, narrowly sulcate in the apical part; a chitinous tubercle in the middle of the basal impression; two tubercles near the median keel, beyond the middle; two smaller tubercles on the same line with the two submedian ones, but close to the outer margins. Cerci with the basal part thick, punctured; the apical (ascending) part not twice as long as the basal, slightly bent forwards and outwards; the apex blunt, but not truncate, projecting only a little above the supra-anal plate.

General coloration brownish-ochraceous, uniform. Elytra with a few indistinct darker spots. Hind femora with the indistinct dark fasciae on the upperside; the whole inner side shining black, with a very sharp, quite transverse pale ring before the apex; the knee brown, with the inner lobe pale and with a very narrow black ring

all round the base; lower inner sulcus pale with the black colour from the inner side partly extending into it. Hind tibiae on the inner side brownish, with a sharp postbasal ring, and another ring, less distinct, behind the middle, pale. Middle part of the two last tergites, the whole hind margin of the anal tergite, tubercles of the supra-anal plate and the end of the cerci, black.

Length of body 21 mm.; of pronotum 5.5 mm.; of elytra 16 mm.; of hind femur 13 mm.

Dimensions of a female (paratype) are as follows: Length of body 25 mm. (somewhat contracted); of pronotum 7.5 mm.; of elytra 19 mm.; of hind femur 16.5 mm.

British Museum specimens: Cape Colony (*Dr. Kraus col.*), 1 ♂ (*type*; at the same time it is the specimen "f" of *Caloptenus crassus* Walk.); S. Africa, 2 ♂♂, 1 ♀ (*paratypes*).

3. *Rhachitopis ceraseus*, sp. n.

(Plate I, fig. 4.)

♂. Larger and more rugose than any of the two species described above. Frontal ridge with the margins parallel, but not quite straight, owing to the rugosities of the face, sulcate throughout, almost reaching the clypeus. Fastigium of vertex distinctly impressed. Pronotum strongly rugose; median keel before the first sulcus almost cristate, though low, between the sulci low, not higher than the rather large tubercles, in metazona suberistate in the fore half and gradually lowered towards the hind angle. Last tergite widely rotundato-emarginate. Supra-anal plate trapezoidal; outer margins straight; hind angles about 90°, not rounded, even slightly attenuate; median keel low, sulcate throughout, bifurcate in the basal third; two small submedian tubercles and two larger submarginal ones; one small tubercle in the basal impression. Cerci with the basal (descending) part somewhat incrassate, punctured; the apical (ascending) part slightly curved outwardly, more than twice as long as the basal part, with the apex somewhat thickened and rotundato-truncate, distinctly projecting above the supra-anal plate.

General coloration reddish-brown, with indefinite brownish and whitish marmoration and spots. Face reddish, with white and brown marks; cheeks whitish. Lateral lobes of pronotum with a pale submedian spot and a blackish spot above it. Elytra with indefinite brownish spots, forming irregular fasciae. Hind femora with two brown fasciae on the upperside; the lower inner sulcus dark cherry-red, the same colour extending to the lower part of

the inner side, while the rest of the latter is shining black, except the bright yellow apex. Hind tibiae yellow, with scarcely perceptible brownish rings. Hind margins of all abdominal segments, almost the whole of the last tergite and the end of the cerci, black.

Length of body 26 mm.; of pronotum 7 mm.; of elytra 23 mm.; of hind femora 14.5 mm.

Dimensions of the paratypic female are as follows: Length of body 29 mm.; of pronotum 9 mm.; of elytra 25 mm.; of hind femora 18 mm.

British Museum specimens: Herbert, Cape Province, 15 v. 1917, 1 ♂ (*type*); Stijdenburg, Cape Province, 26 ii. 1917, 1 ♀; Orange Free State, Bloemfontein distr., Bethulie, Dealesville to Bloemfontein, Petrusburg, 4 ♂♂, 1 ♀ (*all the foregoing specimens collected by Ch. Lounsbury and J. Faure*); Orange River Colony, 8 ♂♂, 23 ♀♀ (*G. E. H. B.-Hamilton*) (*the last 37 specimens are cotypes*).

The sculpture of the head and pronotum is somewhat variable in this species, but other morphological characters are constant.

PLATYPHYMUS, gen. nov.

Related to *Platacanthoides* Kirby, but differing from in the following characters:—

Not smooth, but more or less granulose. Frontal ridge in profile strongly prominent between the antennae, and therefore decidedly reclinate, more so in males. Fastigium of vertex in males elongato-pentagonal, distinctly impressed, in the females rotundato-pentagonal, feebly impressed, in both sexes distinctly, though not sharply, separated from the frontal ridge. Cheeks more or less rugulose and granulose, with the oblique sulcus distinct. Disc of the pronotum with, at least, one pair of small callous tubercles between the second and the third sulcus, often with additional tubercles and granules scattered elsewhere.

♂. Supra-anal plate distinctly narrowed posteriorly, rotundato-trapezoidal; a pair of basal chitinous tubercles, one each side of the basal sulcus; a pair of tubercles close to the median keel beyond the middle of the plate, and a pair of transverse carinulae sideways from these latter tubercles; lateral margins with a slight inflexion opposite these carinulae; hind angles widely rounded. Cerci hook-shaped, with both basal and apical parts vertical and practically equally thick; the apical part distinctly longer than the basal, with the apex obtuse, or somewhat widened.

♀. Lower valves of the ovipositor with the apical parts narrow, distinctly denticulate basally.

Genotype: *Platyphymus granulatus*, sp. n.

Besides the genotype to this genus belong one more new species, *Caloptenus illepidus* Walk. and *Euryphymus tricostatus* Bol.

1. *Platyphymus granulatus*, sp. n.

(Plate I, figs. 5 and 6.)

♂. Moderately rugose and with numerous callous granules and tubercles. Antennae somewhat thickened, scarcely compressed. Frontal ridge between the antennae flat, with a few punctures, at the ocellum and below narrowly impressed. Cheeks with callous granules forming oblique rows each side of the oblique sulcus. Fastigium of the vertex elongato-hexagonal, about twice as long as broad, with the apex very narrowly truncate; its surface distinctly impressed. Occiput with a fine carinula and radial post-ocular callosities. Pronotum rather thick, strongly narrowed anteriorly; the disc slightly tectiform; median keel slightly raised, thick, shining, with a very fine longitudinal furrow, distinctly cut by the third sulcus only; lateral keels well developed, thick, shining, irregular, deeply cut by the transverse sulci, distinctly divergent between the fore margin and the second sulcus, less so from the second sulcus to the hind margin, the distance between them at the hind margin being half again as much as the distance at the fore margin; prozona scarcely longer than metazona, with a pair of small callous tubercles between the first and the second sulcus, and two pairs between the second and the third sulcus, the hindmost tubercles being the largest and very conspicuous; metazona with scattered small tubercles, especially near to the hind margin; fore margin distinctly rotundato-prominent; hind angle straight, not at all rounded, with the sides incrassate and slightly concave; lateral lobes with callous tubercles and rugosities. Prosternal tubercle widened towards the apex which is rotundato-truncate. Elytra reaching the base of the hind knees. The last tergite with a small prominent tooth in the middle of the hind margin. Supra-anal plate broader than long, rotundato-trapezoidal, with the lateral margins rounded and distinctly incised opposite the transverse carinulae; hind angles widely rounded; hind median projection rather thick, with a small emargination at each side of its base; median keel low in the apical half and distinctly raised in the basal half, where it is bifurcate; two large and low chitinous

tubercles at the very base of the plate; two smaller tubercles close to the median keel behind its middle; and two transverse carimulae, almost reaching the lateral margins, sideways from the last-mentioned tubercles. Cerci hook-shaped, vertical; the basal part a little thicker than the apical part, with an obtuse upper projection directed somewhat obliquely upwards; the apical part about twice as long as the basal, slightly and regularly bent, with the apex obtuse.

General coloration reddish-brown. Face and cheeks yellowish-ivory, with brown longitudinal stripes. Occiput behind the eyes somewhat blackish, with the callosities yellowish. Pronotum with a blackish fascia in prozona, along the median keel, constricted before the middle; metazona unicolorous, darker at its fore part; callous tubercles paler; lateral lobes with an ivory callosity in the middle, surrounded by an indefinite blackish spot. Elytra with indistinct brownish spots. Hind femora with the base of the upperside and two spots on it brown; the outer side with indefinite oblique dark fasciae; the inner side (possibly bleached) pale with two indefinite brownish spots along the upper margin; the lower inner sulcus pale. Hind tibiae pale.

Length of body (somewhat contracted) 18 mm.; of pronotum 5.5 mm.; of elytra 12.5 mm.; of hind femur 11.5 mm.

The paratypic female has more distinct markings on the pronotum and elytra, but is otherwise very like the male type. Its dimensions are as follows: Length of body 25 mm.; of pronotum 7.5 mm.; of elytra 14 mm.; of hind femur 13.5 mm.

British Museum specimens: Baringo, 4000 ft., 20 xii. 1912 (Sir H. H. Johnston), 7 ♂♂, 7 ♀♀ (type and 13 paratypes).

2. *Platyphymus bigranosus*, sp. n.

♂. Less rugulose and granulose than *P. granulatus* Uvar. and more compressed laterally. Frontal ridge below the ocellum distinctly excavate. Fastigium of vertex less than twice as long as broad, not deeply impressed. Cheeks scarcely granulose; oblique sulcus distinct. Occiput without radial postocular callosities. Pronotum distinctly compressed laterally, feebly narrowed anteriorly; median keel low, but thick, shining, feebly cut by the transverse sulci; metazona subequal in length to prozona; the latter with a pair of distinct callous tubercles close to the third sulcus and another, scarcely perceptible, pair before the second sulcus, while the rest of the disc is punctured, more closely so in metazona, but not granulose; lateral keels low, thick, shining,

straight, feebly divergent towards the hind margin, which they do not reach by a short distance, distinctly cut by the sulci; lateral lobes rugulose. Prosternal tubercle distinctly widened and emarginate apically. Elytra not reaching the hind knees. Last tergite with a small tooth in the middle of the hind margin. Supra-anal plate much the same as in *P. granulatus*. Cerci with the apical part distinctly widened towards the obliquely truncate apex.

General coloration brownish-grey (very much bleached by spirit). Pronotum with the metazona darker than the prozona; the latter with a median fascia, constricted before the middle. Elytra with indefinite grey spots. Hind femora with two brown fasciae on the upperside; the inner side greyish-pale (probably bleached); a blackish narrow ring at the knee-base. Hind tibiae pale.

Length of body (somewhat contracted) 17.5 mm.; of pronotum 5.5 mm.; of elytra 12 mm.; of hind femora 12 mm.

British Museum specimen: Ngatana, British East Africa (*Gregory Coll.*), 1 ♂ (*type*).

This species is easily separated from *P. granulatus* by the shape and sculpture of pronotum, the shape of the prosternal tubercle and cerci.

3. *Platyphymus illepidus* (Walk.).

1870. *Caloptenus illepidus* Walker, Cat. Derm. Salt. B. M., iv, pp. 690, 694, no. 40.

1870. *Caloptenus pinguis* Walker, l.c., pp. 690, 695, no. 41.

1910. *Caloptenus illepidus* Kirby, Syn. Cat. Orth., iii, p. 547.

1910. *Caloptenus pinguis* Kirby, l.c., p. 547.

There is no reason whatever to regard *C. illepidus* as conspecific with *C. crassus* Walk., they being not congeneric even; thus, Kirby is wrong in putting *illepidus* and *pinguis* (which really are conspecific with each other) as synonyms of *crassus*; he has been evidently misled by the somewhat similar coloration of hind femora in both these species. His definition of Walker's types of *illepidus* and *pinguis* in the British Museum collection is also somewhat dubious: Walker quotes two specimens (♂ and ♀) of *illepidus*, both from Natal, collected by M. Gueinzus, and only one of the specimens labelled by Kirby, as Walker's type, is a female from Gueinzus' collection, while another specimen is not a male, but also a female, from A. Smith's collection,

S. Africa. As for *C. pinguis*, instead of five specimens of Smith's collection, quoted by Walker, there is only one female from Gueinzius' collection, labelled by Kirby, as Walker's type of this species. It is not improbable that some of the actual Walker's types of *C. pinguis* belonged to *C. crassus*, but his descriptions of *illepidus* and *pinguis* leaves no doubt that they are quite different from *crassus*; tubercles on the pronotum supply us with sufficient evidence in support of this view. I have chosen as the holotype of *C. illepidus* the female specimen from Natal, of M. Gueinzius collection, and have no doubt in my mind that *illepidus* and *pinguis* are conspecific, the difference in the shape of prosternal tubercles being imaginary, as it is very often the case with the characters indicated by Walker, and I include this species provisionally in the genus *Platyphymus*, though the discovery of the male may only help to establish its relationship definitely.

There is nothing important to be added to Walker's original description of the species, which is easily separated from the two above described species by the somewhat larger size, thicker pronotum, with distinctly convex lateral keels and with only a pair of callous tubercles on the disc, which is finely punctured in the rest, as well as by the coloration of the hind-legs. The dimensions of the female holotype are as follows:—

Length of body 28 mm.; of pronotum about 7 mm. (the hind angle is broken); of elytra 17 mm.; of hind femora 10 mm.

CALLIPTAMICUS, gen. nov.

Resembling somewhat in the general appearance the genus *Calliptamus*, but differing strongly in the structure of genitalia and other important characters. Frontal ridge in profile feebly convex, moderately prominent between the antennae, distinctly reclinate; its surface flat or scarcely convex, indistinctly impressed below the ocellum in the male; the margins straight, gradually and feebly divergent downwards. Fastigium of the vertex sloping, elongato-oval, its surface scarcely impressed and very indistinctly separated from the frontal ridge. Eyes strongly prominent sideways, oval, distinctly higher than long and as long as the subocular sulcus is high. Cheeks smooth, with the oblique sulcus shallow, but distinct. Pronotum compressed laterally, distinctly narrowed anteriorly; the disc

almost flat; median keel sharp, low, in profile practically straight, scarcely cut by the transverse sulci; metazona slightly shorter than the prozona; lateral keels obtuse and low, but distinct, straight, strongly divergent backwards, cut by narrow sulci; hind angle of the disc very obtuse, but not at all rounded; lateral lobes with the lower margin rotundato-angulate in the middle. Pre-sternal tubercle distinctly longer than broad, slightly widened towards the apex, which is rotundato-truncate. Mesosternal interspace in the male not wider than long, in the female subquadrate. Elytra well developed. Wings faintly coloured at the base, slightly infumate towards the apex. Hind femora not at all incrassate and scarcely dilated, strongly narrowed and attenuate apically; the lower carina not at all dilated, regularly convex. Hind tibiae straight.

♂. The last tergite dilated, with the hind margin incrassate and somewhat recurved and rotundato-emarginate. Supra-anal plate broader than long, trapezoidal; median sulcus fine, but very distinct, not widened basally; two big chitinous tubercles sideways of the sulcus, before the middle of the plate; lateral margins rotundato-sinuate; hind angles slightly attenuate, sharp; hind margin somewhat concave, with a short median projecting lobe. Cerci hook-shaped; the basal part a little broader than the apical, which is strongly laterally compressed; the apex obliquely truncate. Subgenital plate obtusely conical.

♀. Subgenital plate scarcely longer than broad, with the apex truncate, and with two small, obtuse lateral lobes.

Genotype: *Calliptamus semiroseus* Serv.

It is a very peculiar genus with the hind femora slender for a member of the group *Calliptamini*. The shape of the male genitalia, however, leaves no doubt that it belongs here.

Only two species are known at present and they both are represented in the Museum collection.

1. *Calliptamicus semiroseus* (Serv.).

(Plate I, figs. 7 and 8.)

1839. *Calliptamus semiroseus* Serville, Ins. Orth., p. 692, no. 7.

1860. *Aceridium (Calliptamus) hottentotum* Stål, Eug. Resa, Orth., p. 337, no. 90.

1870. *Caloptenus semiroseus*, var. Walker, Cat. Derm. Salt. B. M., p. 691, no. 32.

1870. *Caloptenus hottentotus* Walker, l.c., p. 692, no. 33.
 1870. *Caloptenus plenipennis* Walker, l.c., p. 696,
 no. 43.
 1870. *Caloptenus minor* Walk., l.c., p. 699, no. 48.
 1873. *C[alliptenus]* (*Calliptenus*) *hottentotus* Stål, Rec.
 Orth., i, p. 73, no. 5.
 1876. *E[uryphymus]* *hottentotus* Stål, Öfv. Vet. Akad.
 Förhand., no. 3, p. 43.
 1902. *E[uryphymus]* *semiroseus* M. Fernandez, An. Soc.
 Esp. Hist. Nat., xxx, pp. 262, 276.
 1902. *Calliptamus minor* Kirby, Trans. Ent. Soc. Lond.,
 p. 240, no. 1186.
 1910. *E[uryphymus]* *semiroseus* Kirby, Syn. Cat. Orth.,
 iii, p. 546, no. 15.

The rosy tinge of the wings is sometimes very faint and often bleached in the collection specimens, which caused Walker to separate his *C. minor* from *C. semiroseus*, which are not distinct morphologically.

British Museum specimens: South Africa, 2 ♂♂, 3 ♀♀ (*Walker's types of C. semiroseus var., C. hottentotus, C. plenipennis, C. minor*); Newlands, Namaqualand (*C. D. Rudd*), 3 ♂♂, 8 ♀♀.

2. *Calliptamicus antennatus* (Kirby).

1902. *Calliptamus antennatus* Kirby, Trans. Ent. Soc. Lond., p. 109, no. 118.
 1910. *E[uryphymus]* *antennatus* Kirby, Syn. Cat. Orth., iii, p. 547, no. 16.

Undoubtedly very close to the preceding species, with which it agrees well in all morphological characters, but differs in somewhat larger size and in the coloration; the hind wings in the type and another specimen (named by Kirby as *C. tibialis* Kirby!) are yellowish, faintly infumate towards the apex.

As Kirby has not given the dimensions of this species, I give them here: Length of body ♂ (*type*) 17.5 mm.; of pronotum 5 mm.; of elytra 16.5 mm.; of hind femora 14 mm.

British Museum specimens: Pretoria (*W. L. Distant*), 1 ♂ (*Kirby's type*); Johannesburg, 1 ♂ (named by Kirby as *Euryphymus erythropus* Thnbg. !); 1 ♀ (named by Kirby as *Calliptamus tibialis* Kirby !); Marico, Transvaal, 1 ♀.

PLATACANTHOIDES Kirby.

1870. *Platacanthus* Walk., Cat. Derm. Salt. B. M., iv, p. 714, genus 35 (preoccupied by Fischer in 1850 for a genus of fish).
1910. *Platacanthoides* Kirby, Syn. Cat. Orth., iii, p. 559.

Of middle size, not rugose. Antennae scarcely flattened. Face slightly reclinate. Frontal ridge in profile more or less convex, but only feebly prominent between the antennae, feebly impressed or flat; lateral margins straight, gradually and feebly divergent downwards. Fastigium of the vertex distinctly sloping, not separated from the frontal ridge and forming a widely rounded angle with it, elongato-hexagonal, or oval, in the females scarcely longer than broad; its surface almost flat, or slightly impressed. Cheeks smooth, with the oblique sulcus feeble. Eyes distinctly higher than long and than the subocular sulcus is high. Pronotum with the disc almost flat, median keel well developed, in profile straight or nearly so, feebly cut by the transverse sulci; metazona subequal to prozona, or shorter; its hind angle obtuse, or straight, not at all, or but slightly rounded; lateral keels low, but distinct, complete, more or less convex, distinctly divergent backwards, reaching the hind margin; lateral lobes slightly convex, higher than long; lower margin rotundato-angulate in the middle. Prosternal tubercle widened towards the apex, which is emarginate, on truncate. Mesosternal interspace in the male slightly, in the female distinctly, transverse. Elytra and wings developed, but in the females not reaching the apex of the abdomen. Hind femora dilated, but scarcely incrassate, with the lower carina regularly convex. Hind tibiae in both sexes straight.

♂. (The description taken not from the genotype, in which the male is not yet known.) Last tergite dilated, with a deep and broad, rotundato-quadrangular emargination behind. Supra-anal plate subquadrate with only a pair of chitinous tubercles, with an obtuse median carinula, widely bifurcate in the basal half; hind angles straight; apical lobe small, with two small lateral emarginations at its base. Cerci strongly sinuate, or hook-shaped, with the basal part almost horizontal and dilated inwardly, the apical part vertical. Subgenital plate obtusely conical.

♀. Subgenital plate feebly convex; hind margin with an obtuse triangular projection and two not deep, rounded emarginations. Lower valves of the ovipositor short, obtusely dentate basally.

Genotype: *Platacanthus morosus* Walk.

The above re-description of this (Walker's) genus is

based partly on the genotype, partly on another species of the same genus, described below as new. Walker originally included in the genus *Platacanthus* three species, but he actually indicated *morosus*, as the genotype; two other species (*cervinus* and *includens*) are Australian and have been since removed to other genera (*Azelota* and *Exarna*, respectively).

1. *Platacanthoides morosus* (Walk.).

1870. *Platacanthus morosus* Walker, Cat. Derm. Salt. B. M., iv, p. 714, no. 1.

1910. *Platacanthoides morosus* Kirby, Syn. Cat. Orth., iii, p. 559, no. 1.

♀. Frontal ridge very feebly convex, scarcely impressed just below the ocellum, very minutely and indistinctly punctured near the fastigium, with the margins obtuse and not raised. Fastigium of the vertex scarcely impressed, oval, slightly longer than broad. Occiput with a feeble carinula. Pronotum with the median keel scarcely intersected by the first two sulci; lateral keels feebly convex, slightly cut by sulci; metazona distinctly shorter than the prozona, with the hind angle obtuse, rounded. Prosternal tubercle distinctly widened towards the obtusely emarginate apex.

Length of body 30 mm.; of pronotum 7 mm.; of elytra 16.5 mm.; of hind femora 17 mm.

British Museum specimen: S. Africa (*A. Smith*), 1 ♀ (*Walker's type*).

2. *Platacanthoides bituberculatus*, sp. n.

(Plate I, figs. 9 and 10.)

||1870. *Caloptenus crassus* Walker, Cat. Derm. Salt. B. M., iv, p. 694, no. 39 (*partim*).

♂. Smooth. Frontal ridge below the ocellum feebly impressed, above it distinctly punctured, with the margins somewhat raised. Fastigium of the vertex distinctly impressed, parallel-sided, about twice as long as broad. Occiput without a carinula. Pronotum with the median keel distinctly cut by three sulci; lateral keels practically straight, distinctly intersected by the sulci; metazona subequal to the prozona; hind angle a little more than 90°, slightly rounded apically. Elytra reaching the hind knees. Prosternal tubercle slightly widened towards the apex, which is rotundato-truncate. Supra-anal plate quadrangular, as broad as long;

median keel feeble, bifurcate in the basal third; two minute chitinous points close to the keel beyond the middle; the hind median projection small, decurved, with a rather deep and sharp emargination at each side of its base. Cerci with the basal part thick, almost horizontal; the apical part vertical, longer than the basal part, narrowed towards the obtuse apex, its fore inner margin somewhat expanded, and the hind margin with a round expansion near the base. Subgenital plate obtusely conical.

General coloration brownish-grey, with indefinite brownish markings. Elytra with rather large brownish spots. Wings hyaline, with the veins in the fore part brownish. Hind femora with indefinite dark spots on the upperside; the inner side yellowish (probably bleached) and almost wholly occupied by a black spot; a narrow black ring on the inner side before the knee. Hind tibiae yellowish.

Length of body 20 mm.; of pronotum 5.5 mm.; of elytra 16 mm.; of hind femora 13 mm.

British Museum specimen: S. Africa (*A. Smith*), 1 ♂ (*one of Walker's types of C. crassus*).

The species, of course, has nothing to do with the true *C. (Rachitopsis) crassus* Walk., and even the coloration of the hind femora does not agree with the Walker's description of that species.

2a. *Platacanthoides bituberculatus* var. *attenuatus*, n. var.

♂. Differs from the type by the following characters: elytra broader; prosternal tubercle very slightly emarginate at the apex; tubercles of the supra-anal plate larger, acute; apical part of the cerci more attenuate; the inner side of the hind femora black, margined with red; lower outer sulcus yellow.

Dimensions as in the typical form.

British Museum specimen: Wepenor, Orange Free State (Division of Entomology, Pretoria), 1 ♂ (*type of the variety*).

I do not think that the above-indicated characters are of a specific value; the difference in the coloration of the hind femora may depend on the type of the variety being better preserved than that of the typical form which is evidently much bleached.

MARTINEZIUS, gen. nov.

Related to *Plegmapterus* M. Fern., but well distinct from it by the practically smooth head and pronotum, as well as by the developed lateral keels of the latter.

Antennae filiform, not compressed. Face distinctly reclinate. Frontal ridge in profile convex between fastigium and antennae, straight in the lower part; its margins obtuse, not raised, somewhat approximated to each other near the fastigium, very feebly divergent downwards, strongly divergent in the lowest part, where they are almost obliterate; surface of the ridge smooth, with a few punctures in the upper part, and a feeble impression near the ocellum. Eyes strongly prominent, only slightly higher than long, almost round; fore margin convex though less so than the hind margin; subocular distance subequal to their length. Fastigium of vertex strongly sloping, forming an obtuse, rounded angle with the frontal ridge, twice as long as it is broad, somewhat widened forwards and again narrowed apically; its surface impressed; margins very obtuse, the apical ones even obliterate. Occiput very short, smooth. Cheeks practically smooth, with the oblique furrow scarcely developed. Pronotum compressed laterally, strongly narrowed anteriorly; disc slightly convex in prozona, flat in metazona; median keel very low and rather broad, with a scarcely perceptible sulcus all along, in profile practically straight, feebly interrupted by the first two sulci and rather deeply so by the hind sulcus, which is placed just before the middle; lateral keels very obtuse, deeply cut by the transverse sulci and therefore strongly sinuose, subparallel between the fore margin and the first sulcus, distinctly divergent between the first and third sulcus, subparallel in the metazona; fore margin of the disc practically straight; hind angle near to 90° , scarcely rounded, with the sides distinctly concave; lateral lobes slightly higher than long, with the lower margin very feebly rounded and in the fore third slightly ascending; fore angle obtuse, slightly rounded; hind angle almost straight but more rounded; hind margin straight, very oblique. Prosternal tubercle not broader than long, transversely compressed, almost quadrangular, with the apical angles rounded. Mesosternal interspace in the male slightly longer than broad, in the female scarcely transverse, in both sexes (especially in the male) more narrow than one of the lobes. Elytra much longer than the hind femora, distinctly narrowed basally, parallel-sided in the rest, with the apex rounded; their reticulation thick and dense. Wings coloured, with the apex infumate. Hind femora rather dilated, but not incrassate; the upper carina strongly serrulate; the lower carina rather dilated, but regularly convex. Hind tibiae a little shorter than the femora, straight.

♂. Last two tergites widened and incrassate; the anal segment deeply rodunate-emarginate, with the margin depressed and strongly chitinised. Supra-anal plate transverse, rotundato-trape-

zoidal, with a prominent apical lobe and low median carina, bifurcate basally; with two small chitinous tubercles near the carina, before the middle. Cerei vertical, consisting of a descending, rather thick basal part, and an ascending, thinner apical part, prominent above the supra-anal plate. Subgenital plate small, round.

♀. Subgenital plate with the apex prominent, with two rounded apical lateral emarginations.

Genotype: *Martinezius fernandezi*, sp. n.

This new genus is undoubtedly allied to *Plegmapterus*, as the reticulation of elytra is practically the same in both these genera, but it strongly differs from *Plegmapterus* by the above-indicated characters. There are, possibly, some more differentiating characters in the structure of the male genitalia, but the male of *Plegmapterus* is, as yet, unknown.

To the genus *Martinezius* belongs, probably, besides the genotype, *Euryphymus sinuosus*, M. Fern., which is unknown to me save by description.

I propose to name this beautiful insect after the first reviser of the group *Calliptamini*, Mr. Antonio Martinez y Fernandez-Castillo.

1. *Martinezius fernandezi*, sp. n.

(Plate I, figs. 11 and 12.)

♂. Ochraceous-brown, with brown design and spots; the under side and legs covered with rather long greyish hairs. Head and face brown with greyish marmoration. Pronotum very feebly rugulose in the hind part of the metazona; its disc brown, in the metazona of a lighter shade, with indefinite narrow pale lateral fasciae; lateral lobes reddish-brown. Elytra greyish-ochraceous, with numerous small brown spots, rather equally distributed, somewhat confluent in the basal part. Wings golden yellow, with the veins and veinlets in the apical half brown, and the apex faintly infumate. Hind femora on the outer side brown, with indefinite dark fasciae on the somewhat paler-coloured upperside; the inner lower sulcus shining black, this colour extending partly also on the lower part of the inner side which is dirty yellow, merging into red at the apex; the hind knee unicolorous brown all over except the red inner lobe. Hind tibiae bright red with black tips of the spines. Hind tarsi orange-red.

Length of body 25.5 mm.; of pronotum 7 mm.; of elytra 23 mm.; of hind femur 14.5 mm.

♀ (paratype). Differs from the male by the disc of pronotum chocolate-brown all over, except the rather well-defined, narrow greyish lateral fasciae; and by the bright rose-coloured wings.

Length of body 35 mm.; of pronotum 9.5 mm.; of elytra 30 mm.; of hind femur 21 mm.

Another paratyptic female is with golden-yellow wings, like the type male, but its hind tibiae are also golden-yellow, instead of being red.

The species differs from *M. sinuosus* M. Fern. (see above), so far as it may be established by the description of the latter, in the shape of the male cerci which in that species are dilated apically.

British Museum specimens: Deelfontein (*Col. Sloggett*), 1 ♂, 2 ♀♀ (*type and paratypes*).

CALLIPTAMULUS, gen. nov.

Very much alike in its habitus to *Calliptamus*, but small and strongly differing from it in the shape of the prosternal tubercle and of the male genitalia.

Antennae rather thick, very feebly widened beyond the middle. Face feebly reclinate, smooth, scarcely punctured. Frontal ridge in profile practically straight; its margins obtuse, slightly gradually divergent from fastigium towards the clypeus; the surface flat or only feebly impressed near the ocellum. Fastigium of vertex sloping, elongato-pentagonal, with the apex truncate; lateral carinae near the apex obliterate; apical transverse carina obliterate; surface feebly impressed. No temporal foveolae. Cheeks smooth; oblique sulcus feeble. Eyes rather large, oval, distinctly longer than the subocular sulcus is high, and distinctly higher than they are long. Occiput without a median carinula. Pronotum compressed laterally, but not constricted anteriorly; its disc almost flat or feebly convex; median carina in profile straight, low, but sharp, cut by three transverse sulci; metazona subequal in length to prozona, slightly rugulose; lateral keels well distinct, though low, straight or nearly so, gradually and feebly divergent backwards, reaching the hind margin or subobliterate quite close to it; lateral lobes scarcely convex, forming an almost straight angle with the disc, more or less rugulose, distinctly higher than long; their fore margin vertical, scarcely sinuate; fore angle very obtuse, widely rounded; lower margin rotundato-angulate in the middle; hind angle very obtuse, rounded; hind margin strongly oblique. Prosternal tubercle subtransverse, obtusely conical. Mesosternal interspace subquadrate, or slightly transverse in the male and distinctly trans-

verse in the female. Elytra developed, parallel-sided, with the apex rounded. Wings a little shorter than the elytra, hyaline or coloured. Hind femora short and broad, scarcely incrassate; the upper carina feebly denticulate; the lower carina regularly convex. Hind tibiae straight.

♂. The last tergite slightly widened on its sides, shallowly rotundato-emarginate on the upperside, with the hind margin somewhat incrassate. Supra-anal plate about as long as broad, with the sides widely rounded and with a short median projection behind; the median sulcus scarcely perceptible in the basal part only; no distinct chitinous tubercles, or only a pair of very small ones. Cerci almost horizontal; the basal part thick and broad; the apical part thin, gradually recurved; the apex obtuse or pointed. Subgenital plate obtusely conical.

♀. Subgenital plate with an obtusangular projection behind, and two shallow angular emarginations sideways from the projection; its surface feebly convex. Lower valves of the ovipositor, with the apical parts short, broad, obtuse, not dentate basally.

Genotype: *Calliptamulus sulfurescens*, sp. n.

This peculiar genus seems to be represented in South Africa by many species, since not less than three distinct new species may be recognised amongst quite a small lot of specimens now before me. The species are very close to each other, but still there are quite good characters which enables us to separate them without any difficulty.

1. *Calliptamulus sulfurescens*, sp. n.

(Plate I, fig. 20.)

♂. Frontal ridge feebly impressed near the ocellum, above it flat but with the margins somewhat raised. Fastigium of the vertex at the apex open, forming a widely rounded angle with the frontal ridge. Lateral keels of pronotum very distinct, but obtuse, almost straight, scarcely divergent backwards, reaching the hind margin; hind angle straight, not rounded. Mesosternal interspace slightly transverse. Elytra extending a little beyond the apex of the abdomen, but not reaching the hind knees. Supra-anal plate with two very minute, scarcely perceptible chitinous points before the middle. Cerci with the basal part a little longer than high; the apical part somewhat longer than the basal; the lower margin in the apical third obtusangulate; the upper margin of the apical part feebly and regularly concave; apex obtuse.

General coloration brownish-ochraceous, with brown markings.

Face and the whole of the head with brown dots and spots. Occiput with an ill-defined brown median fascia, widened posteriorly. Pronotum rather irregularly marmorated with brown; lateral keels paler and shining. Elytra pale-greyish, with a series of brownish spots along the middle. Wings feebly sulphurous basally, with the veins in the anterior part brownish. Hind femora marmorated and mottled with brown, with three not well-defined blackish spots and a preapical ring of the same colour, on the upperside; the inner side black, with the upper margin and the preapical ring yellow; the lower margin and lower inner sulcus bright red; inner knee lobe yellow, somewhat reddish at the base. Hind tibiae bright red, with brownish spots on the outer side, and with an inconspicuous yellow postbasal ring.

Length of body 16 mm.; of pronotum 4 mm.; of elytra 12 mm.; of hind femora 10 mm.

♀ (paratype). Differs from the male type by the somewhat convex lateral keels of the pronotum and by the elytra not reaching the apex of abdomen. Mesosternal interspace distinctly transverse.

Length of body 24.5 mm.; of pronotum 6 mm.; of elytra 14.5 mm.; of hind femora 13.5 mm.

British Museum specimens: Orange Free State: Bloemfontein, 11 ii. 1918, 1 ♂ (*type*); 24 ii. 1918, 1 ♂, 1 ♀; 7 iv. 1918, 1 ♀; Smithfield distr., 9 v. 1917, 1 ♂; Wepener, 6 vi. 1918, 1 ♀ (*the five latter considered paratypes*; all specimens sent by the Division of Entomology, Pretoria, and one male and one female returned to the Division).

2. *Calliptamulus hyalinus*, sp. n.

(Plate I, fig. 21.)

♂. Differs from *C. sulfurescens* Uvar., by the following characters: Size somewhat larger. Frontal ridge sulcate almost throughout. Lateral keels of pronotum somewhat convex, obliterate behind the middle of the metazona. Mesosternal interspace distinctly transverse. Cerei, with the apical part strongly pointed; the lower margin rather regularly convex; the upper margin of the apical part beyond its middle straight.

General coloration ochraceous, with very indistinct greyish spots. Wings whitish basally, with the veins in the fore part brownish. Hind femora with three very indefinite brownish spots on the upperside; the inner side sulphurous with a series of big blackish spots; the lower inner sulcus sulphurous. Hind tibiae sulphurous.

Length of body 16.5 mm.; of pronotum 4.5 mm.; of elytra 12.5 mm.; of hind femora 11.5 mm.

British Museum specimen: Petrus, Orange Free State, 23 i. 1919 (*type*; sent by the Division of Entomology, Pretoria).

3. *Cailliptamulus roseipennis*, sp. n.

(Plate I, fig. 19.)

♂. Size as in *C. sulfurescens* Uvar. Differs from that species in the following characters:

Frontal ridge above the ocellum flat, strongly punctured, at the ocellum impressed. Fastigium of the vertex forming a distinct, though very obtuse and rounded angle with the frontal ridge. Pronotum shorter; lateral keels somewhat convex and distinctly divergent backwards, almost reaching the hind margin. Prosternal tubercle not triangular, but slightly narrowed towards the obtusely angulate apex. Supra-anal plate without any trace of chitinous tubercles, but with a very fine transverse sulcus. Cerci with the apical part subequal in length to the basal part; the lower margin convex from the base up to the apical third, then obtusangulate, and straight in the rest; upper margin of the apical part regularly concave; apex less obtuse than in *C. sulfurescens*.

General coloration brownish-grey, with dark-grey markings. Hind femora with three rather distinct blackish spots on the upper-side; the inner side yellowish-red, somewhat blackened along the upper margin and at the base; lower inner sulcus orange red. Hind tibiae bright red. Wings rose; the fore part strongly infumate.

Length of body 15 mm.; of pronotum 3.75 mm.; of elytra 12 mm.; of hind femora 10 mm.

Type in the Hope Museum, Oxford; it is from Knysna, Concordia, Cape Province, 22 ii. 1914 (*J. B. Longstaff*).

BRACHYPHYMUS, gen. nov.

♂. Rather closely allied to *Euryphymus*, but less rugose, though not at all shining. Antennae filiform, not compressed. Face vertical sulcate throughout, the sulcus not separated from the impression of the vertex; margins below the ocellum bisinuose. Eyes strongly prominent, round, a little higher than long and scarcely higher than the subocular distance. Cheeks without a distinct oblique impressed furrow. Fastigium of vertex distinctly sloping, twice as broad as the frontal ridge below the ocellum, concave,

with margins parallel, convergent forwards where they are continuous with the margins of the frontal ridge, but not backwards. Occiput without a median carina and postocular radial rugosities. Pronotum rather compressed laterally, distinctly narrowed forwards; median keel well developed, but low, in profile straight, in prozona obtusely tridentate, in metazona slightly convex; third sulcus in the middle; lateral keels rather well developed, though obtuse, reaching the hind margin, but obliterate close to the fore margin and almost obliterate between the first and second sulcus, gradually divergent backwards, deeply cut by transverse sulci; fore margin rotundato-prominent; hind angle practically straight, rounded at the apex, with the sides somewhat concave; lateral lobes slightly higher than long, with the lower margin straight, fore angle obliquely truncate and rounded, hind angle straight, scarcely rounded. Prosternal tubercle short, thick, conical. Mesosternal interspace trapezoidal, a little broader than long and almost as wide as one of the lobes; metasternal interspace subquadrate. Elytra extending beyond the hind knees, with sparse, but thick reticulation. Wings not coloured. Hind femora short, moderately broad, not at all thickened; upper carina feebly serrulate; lower carina not dilated, regularly convex. Hind tibiae very feebly incurved, with 5-6 outer and 8 inner spines. Last tergite dilated and rotundato-emarginate. Supra-anal plate slightly broader than long, with the sides rounded and an apical lobe; median keel low, bifurcate basally; two rather large chitinous tubercles about the middle, close to the median keel. Cerci with thick basal part and round, attenuate and recurved apical part, with the apex rather acute. Subgenital plate small, round.

Genotype: *Brachyphymus sulfuripes*, sp. n.

This genus is easily separated from *Euryphymus*, to which it is rather closely allied, by the shape of the prosternal tubercle and of the cerci, which are of the same type as in *Calliptamulus*.

1. *Brachyphymus sulfuripes*, sp. n.

(Plate I, fig. 22.)

♂. Ochraceous, with abundant brick-red spots and dots, and with blackish design. Antennae whitish. Face pale, marmorated with brown. Cheeks whitish with brick-red marmoration. Fastigium of vertex with the apex brownish, and with a brick-red longitudinal fascia almost reaching the pronotum and including a more narrow blackish fascia. Pronotum on the upperside reddish-ochraceous, marmorated with brown, blackish along the lateral

keels; lateral lobes in metazona reddish, with large brick-red spots, in prozona with an ivory white callous spot in the middle and a blackish spot above it. Elytra with the scapular and radial veins brick-red, and all the hind half brownish, with a few scattered brownish spots along the middle and in the anal area. Wings hyalinous, scarcely infumate in the apical half, with the veins and veinlets in the fore half brown; the base very faintly yellowish. Abdomen yellowish, with chocolate spots along the sides and with the hind margins of sternites brown. Fore and middle femora brick-red and tibiae yellowish, marmorated with brown. Hind femora on the outer side ochraceous, with numerous brick-red spots and two interrupted blackish fasciae on the upperside; the lower outer sulcus whitish; lower inner sulcus and the inner side black, with the apex sulphurous; outer knee lobes unicolorous with the rest of the outer side, with a black point at the base, and the inner knee lobes sulphurous, also with a black basal point. Hind tibiae sulphurous with blackish streaks at the base, in the middle and at the apex of the inner side; the base of the outer side with brick-red spots; spines in the apical half black.

Length of body 19 mm.; of pronotum 5 mm.; of elytra 18 mm.; of hind femur 12 mm.

Described from a single male sent by the Division of Entomology, Pretoria, and captured at Strijdenburg, Cape Province, 26 ii. 1917.

British Museum specimen: the type.

Genus EURYPHYMUS Stål.

1873. *Euryphymus* Stål, Rec. Orth., i, p. 72 (*partim*!).
 1876. *Euryphymus* Stål, Öfv. K. Vet.-Akad. Förhandl., no. 3, p. 40 (*partim*!).
 1877. *Euryphymus* Stål, Syst. Acrid., i, p. 30, no. 14 (*partim*!).
 1902. *Euryphymus* M. Fernandez, An. Soc. Esp. Hist. Nat., xxx, pp. 258, 259 (*partim*!).
 1907. *Phymeurus* Giglio-Tos, Boll. Mus. Torino, xxii (554), p. 27.
 1910. *Phymeurus* Kirby, Syn. Cat. Orth., iii, p. 545.
 1910. *Euryphymus* Kirby, l.c., pp. 545-548 (*partim*!).

When Stål described in 1873 the genus *Euryphymus* (which he regarded then as a subgenus of *Calliptenus*), he included in it only three species: *ferruginosus* St., *haematopus* L. and *erythropus* Thunbg., while he left

hottentotus St. in the subgenus *Calliptenus* (i. sp.). Three years later, in his paper on South African Orthoptera, he for some unknown reason altered his original conception of the genus *Euryphymus* by including in it *hottentotus* and two more new species, *curvipes* St. and *vylderi* St., which rendered the generic diagnosis extremely vague and indefinite. As a direct sequel of this, the genus *Euryphymus* became a kind of storing place for all African species of *Calliptamini* with the inner spurs of the hind tibiae not elongate (*i. e.* which could not be put into *Caloptenopsis*), however strikingly different from each other those species might be. As this group is very well developed in South Africa, the number of species described as "*Euryphymus*" speedily increased up to 19, as listed in M. Fernandez's revision. This latter author removed, though, one species—*ferruginosus* St. from *Euryphymus* and made it the type of a new genus, *Plegmapterus* M. Fern.; thus only two possible genotypes, *viz.* *haematopus* and *erythropus*, remained in the genus *Euryphymus*.

Giglio-Tos described in 1907 the genus *Phymeurus* with *Ph. pardalis* G.-T., as the genotype. It is quite obvious from the description of *Phymeurus* that Giglio-Tos compared it neither with *haematopus* nor with *erythropus*, but with some species of what had been at that time called *Euryphymus*. Moreover, there is no doubt that *Ph. pardalis* is very closely related to *haematopus* and obviously congeneric with it. Since Kirby has indicated *haematopus* as the genotype of *Euryphymus*, *Phymeurus* must be regarded as a pure synonym of *Euryphymus*, and the latter genus must be restricted to *haematopus* L., *eremobioides* Bol. and *tuberculatus* M. Fern., while *erythropus* Thunbg. presents a type of a distinct new genus.

The description of *Phymeurus*, as given by Giglio-Tos, may be used as generic diagnosis of *Euryphymus* in the restricted sense, with addition of characters of the male genitalia which are given in my key to the genera (see p. 120).

All other 35 species included in the genus *Euryphymus* in Kirby's Catalogue belong partly to several new genera described in this paper, partly to *Caloptenopsis* (*unicarinatus* Krauss, *marginipennis* Karsch and *glaucoptis* Walk.; see pp. 127 and 129 of this paper), while the generic position of several insufficiently described species of I. Bolivar and other authors, as well as of eight of Walker's species

(*exemptus*,* *testaceus*, *concisus*, *signatus*, *turbidus*, *mutator*, *cineticollis* and *reductus*) the types of which are lost, cannot be determined.

1. *Euryphymus hæmatopus* (L.).

(Plate I, fig. 13.)

I believe it superfluous to repeat here the synonymy of this species, quite correctly given by Kirby (Syn. Cat. Orth., iii, p. 546, no. 14).

The species reminds us very much of the *Tmethis muricatus* Pall. and is also extremely variable in the general coloration, as well as to a certain extent in the degree of development of rugosities and tubercles on the head and pronotum. The males are strikingly different from the females in the size, but there is no doubt as to their identity. The coloration of the inside of hind femora is, in all specimens studied by me, black except a narrow stripe along the upper margin and a preapical ring, which are either bright red or orange-red, as the hind tibiae also are. The dimensions of both sexes are as follows:—

	♂♂	♀♀
Length of body	18-22 mm.	29-35 mm.
„ „ pronotum	4.5-5	7-8.5
„ „ elytra	16-18	25-30
„ „ hind femora	12-14	20-22

British Museum specimens: S. Africa, 2 ♀♀; Cape of Good Hope, 3 ♀♀; Stellenbosh, 1 ♂; Simonstown, 1 ♂ (*Philip de la Garde*); Saldanha Bay, 1 ♂, 1 ♀ (*Philip de la Garde*).

2. *Euryphymus eremobioides* (I. Bol.).

- ||1870. *Caloptenus hæmatopus* Walker, Cat. Derm. Salt. B. M., iv, p. 693, no. 35 (*partim*!).
 1889. *E[uryphymus] eremobioides* I. Bolivar, Journ. Sci. Lisboa, seg. ser., p. 168, no. 168.
 1902. *E[uryphymus] eremobioides* M. Fernandez, An. Soc. Esp. Hist. Nat., xxx, pp. 260, 262.
 1907. *P[hymeurus] pardalis* Giglio-Tos, Boll. Mus. Torino, xxii (554), p. 28.

* Kirby (Syn. Cat. Orth., iii, p. 547, no. 27) marked *E. exemptus* Walk. with two asterisks, meaning that its type is in the British Museum; but the insect under this name is a *Caloptenopsis*, and does not agree at all with Walker's description of *Acridium exemptum*.

1910. *P[hymeurus] pardalis* Kirby, Syn. Cat. Orth., iii, p. 545, no. 1.
 1910. *P[hymeurus] eremobioides* Kirby, l.c., p. 545, no. 2.

There is very little doubt in my mind that *pardalis* Giglio-Tos is conspecific with *eremobioides* Bol., the only difference between them, so far as it may be concluded from Giglio-Tos's description, being the absolute size, which seems to be rather inconstant in all species of the genus.

British Museum specimen: Congo, 1 ♀ (this is specimen "f" of Walker's *Caloptenus haematopus* L.).

3. *Euryphymus tuberculatus* M. Fern.

(Plate I, fig. 14.)

1898. *Euryphymus tuberculatus* M. Fernandez, Actas Soc. Esp. Hist. Nat., Feb. 1898, p. 35.
 1902. *E[uryphymus] tuberculatus* M. Fernandez, An. Soc. Esp. Hist. Nat., xxx, pp. 261, 267.
 1910. *E[uryphymus] tuberculatus* Kirby, Syn. Cat. Orth., iii, p. 546, no. 12.

It is with a certain hesitation that I refer four specimens of *Euryphymus* to this species, described by the female only. Three specimens before me are males and one is female; the latter is somewhat larger than the type and has hind tibiae yellow, instead of red; the same coloration of hind tibiae is also in one of the males (from S. Rhodesia), while two other males are with hind tibiae red, as in the type. As I, however, do not think the coloration of tibiae an important specific character in this genus, I feel sure that all four specimens are conspecific with each other and, very probably, with *E. tuberculatus*.

British Museum specimen: Bloemfontein distr., Orange Free State, 8 v. 1917, 1 ♂ (*Division of Entomology, Pretoria*).

Hope Museum specimens: The Matopos, S. Rhodesia, 4500-5500 ft., 10 ix. 1905, 1 ♂ (*E. B. Poulton*); Warrenton, Cape Colony, about 3900 ft., 7 ix. 1905, 1 ♂, 1 ♀ (*E. B. Poulton*).

KEY TO THE SPECIES OF *EURYPHYMUS*.

1. (2) Male cerci in the apical half distinctly compressed and dilated, with the apex rounded, obtuse (fig. 13). Male anal

plate trapezoidal, broader than long, with the hind angles obtuse, rounded. Median keel of the pronotum high, distinctly compressed laterally; lateral keels formed each by a row of separate, sharp carinulae and tubercles. Hind tibiae red or orange on both sides. *E. haematopus* L.

2. (1) Male cerci in the apical half obtusely conical* (fig. 14). Male anal plate with the hind angles widely rounded. Lateral keels of the pronotum more or less continuous, interrupted only by furrows.
3. (4) Median keel of the pronotum high and thick. Hind tibiae greyish on the outer side and blackish on the inside, with the base coral-red. *E. cremobioides* Bol.
4. (3) Median keel of the pronotum thin and low. Hind tibiae of the same colour (red or yellow) on both sides.

E. tuberculatus M. Fern.

There is one more, probably new, species amongst the collection sent by the Division of Entomology, Pretoria, but it is represented by two females only, and I abstain from describing it.

ACROPHYMUS, gen. nov.

Related to *Amblyphymus* Uvar., but differing from it in the shape of pronotum, of prosternal tubercle, of the male genitalia, as well as by the lateral elytra and undeveloped wings.

Finely ruguloso-punctate, but not at all tuberculate. Antennae scarcely compressed. Face slightly reclinate, rather rugose, frontal ridge in profile feebly convex, its surface perfectly flat, rather densely punctured above the median ocellum and sparsely below it, with the margins smooth, convex, feebly and gradually divergent towards the clypeus. Fastigium of the vertex distinctly sloping, elongato-hexagonal, with the surface scarcely impressed, margins slightly raised. Temporal foveolae small, very irregular, coarsely punctured. Occiput with a fine incomplete carinula, reaching the base of the fastigium. Eyes large, oval, distinctly higher than long, and slightly higher than the subocular sulcus, with the fore margin feebly convex. Checks scarcely rugulose, sparsely punctured, with the oblique sulcus feeble. Pronotum thick, neither laterally compressed, nor constricted; its disc distinctly convex; median keel low, but very distinct, in profile straight or slightly convex, feebly intersected by the three transverse sulci; prozona

* The male of *E. cremobioides* is known to me from Bolivar's and M. Fernandez' descriptions only.

half again as long as the metazona; lateral keels feebly developed, not raised, but perceptible, very slightly divergent from the fore margin towards the first sulcus, distinctly divergent and convex between the first and third sulcus, obliterate in the metazona; hind margin of the disc very widely rounded; lateral lobes distinctly convex, with a kind of very obtuse horizontal keel above the middle of the prozona, coarsely punctured throughout; their fore margin slightly sinuate; fore angle obtuse, rounded; lower margin rotundato-angulate before its middle; hind angle obtuse, rounded; hind margin very oblique, slightly sinuate near the lower angle. Prosternal tubercle with the basal part thick, transverse, but strongly attenuate and pointed apically. Mesosternal interspace trapezoidal, in the male about as broad as long, in the female strongly transverse. Elytra lateral, much shorter than the pronotum; preradial area strongly dilated and rotundato-emarginate behind; apex rather acute. Hind femora and tibiae as in *Amblyphymus*.

♂. The last tergite strongly dilated and incrassate, with a rectangular emargination. Supra-anal plate trapezoidal, longer than broad, with the hind angles obtuse; the apical projection rather thick and short; median sulcus narrow, with thick raised margins, not reaching the apex of the plate; a transverse row of four chitinous tubercles. Cerci directed obliquely backwards, reaching the apex of the supra-anal plate, with the basal half thick, obtusely projecting above the base of the apical part; the latter foliaceous, with the apex broadly rounded and incurved. Subgenital plate obtusely triangular.

♀. Subgenital plate widened posteriorly, shallowly rotundato-bi-emarginate apically, with a scarcely perceptible median impression. Lower valves of the ovipositor with the basal parts broad, rounded, not dentate, and the apical parts small and narrow.

Genotype: *Euryphymus squamipennis* Brancs.
Euryphymus sigmoidalis Bol. also belongs here.

1. *Acrophymus squamipennis* (Brancs.).

(Plate I, fig. 15.)

1898. *Euryphymus squamipennis* Brancsik, Jahresh. Ver. Trencs. Com., xix-xx, p. 79, pl. 3, fig. 20a-c.
1900. *Euryphymus cuspidatus* Karsch, Entom. Nachr., xxvi, p. 282, fig.
1902. *E[uryphymus] squamipennis* M. Fernandez, An. Soc. Esp., xxx, pp. 262, 277.

1910. *E[uryphymus] squamipennis* Kirby, Syn. Cat. Orth., iii, p. 545, no. 4.

1910. *E[uryphymus] cuspidatus* Kirby, l.c., p. 545, no. 5.

The synonymy of *cuspidatus* Karsch and *squamipennis* Brancs. is beyond any doubt, though Brancsik's description of the male genitalia is incorrect (he evidently mistook the last tergite for the supra-anal plate), and Karsch does not describe them at all.

British Museum specimens: Salisbury, Mashonaland, (G. A. K. Marshall), 1 ♂, 3 ♀♀.

Hope Museum specimens: N.E. Rhodesia, Fort Jameson to Nyanji, 3000-3500 ft. (S. A. Neave), 1 ♂; S. Rhodesia, 6 miles W. of Feira, Mt. Kapsuku (S. A. Neave), 1 ♂, 1 ♀, in copula.

ANEURYPHYMUS, gen. nov.

Moderately rugulose. Antennae somewhat flattened, slightly dilated beyond the middle. Face vertical, practically smooth; frontal ridge in profile feebly convex; its margins straight, gradually divergent towards the clypeus; its surface above the ocellum nearly flat and punctured, below the ocellum impressed and smooth. Fastigium of vertex distinctly sloping, separated from the frontal ridge by a transverse keel, but not forming an angle with it; its general form is elongato-hexagonal, more than twice as long as broad and in both sexes slightly broader than the frontal ridge below the ocellum; its surface strongly impressed; lateral margins convergent behind. Occiput with a median carinula in its fore part, extending also on the fastigium; sometimes there are also two shorter lateral carinulae close to the middle one; postocular area with radial rugosities. Eyes oval, with the fore margin almost straight; their height exceeding a little the height of the subocular sulcus and subequal to one and a half of their length. Cheeks practically smooth, but with a deep oblique furrow and obtuse tubercles behind it. Pronotum strongly narrowed anteriorly moderately rugulose, with rugosities shining; fore margin very obtusely prominent; hind angle straight; median keel slightly raised, in profile practically straight, very feebly, or not all, cut by the two first sulci; the third sulcus a little more developed, but narrow, placed slightly before the middle; lateral keels well developed, though sometimes not reaching the hind margin, shining, very deeply cut by transverse sulci, feebly divergent towards the first sulcus, more divergent and convex between the first and third sulcus, subparallel and slightly concave in metazona; lateral lobes

with an irregular longitudinal ridge in the upper part of prozona; lower margin rounded and prominent just before the middle. Prosternal tubercle transverse, truncate. Mesosternal interspace transverse in female, slightly longer than broad in the male; metasternal interspace narrow in the male, and subtransverse in the female. Elytra developed; wings hyalinous. Hind femora broad and short, but not incrassate; upper carina denticulate; lower carina regularly convex. Hind tibiae straight. The two last tergites of the male dilated; the hind one emarginated, with the hind margin somewhat incrassate. Male supra-anal plate scarcely longer than broad, with the sides regularly rounded, and with an obtuse apical tooth; its median keel rather raised, bifurcate at the base; two short, oblique chitinous ridges near the basal angles and a transverse row of 2-4 tubercles about the middle. Male cerci obliquely ascending, as long as the supra-anal plate, thick, with blunt apex, convex on the outer side and concave from inside, with the lower margin obtusely bidentate. Male subgenital plate short, round. Subgenital plate of the female with two triangular emarginations at the apex.

Genotype: *Gryllus erythropus* Thunbg.

1. *Aneuryphymus erythropus* (Thunbg.).

(Plate I, figs. 16 and 17.)

1815. *G[ryllus] erythropus* Thunberg, Mém. Acad. Pétersb., v, p. 248.
 1824. *G[ryllus] erythropus* Thunberg, l.c., ix, pp. 399, 426, no. 94.
 1873. *C[alliptenus] (Euryphymus) erythropus* Stål, Rec. Orth., i, p. 73, no. 4.
 1876. [*Euryphymus*] *erythropus* Stål, Öfver. K. Vetensk. Akad. Förhand., 3, p. 43.
 1902. *E[uryphymus] erythropus* M. Fernandez, An. Soc. Esp. Hist. Nat., xxx, pp. 261, 268.
 1910. *E[uryphymus] erythropus* Kirby, Syn. Cat. Orth., iii, p. 546, no. 13.

British Museum specimens: Knysna, 1 ♀; Pretoria (*W. L. Distant*), 4 ♂♂, 13 ♀♀.

Hope Museum specimens: Kimberley, Sanatorium grounds, 5 ix. 1905 (*G. L. Parson and E. B. Poulton*), 3 ♀♀.

2. *Aneuryphymus rhodesianus*, sp. n.

(Plate I, fig. 18.)

♂. Very much like *A. erythropus*, but differing from it in the following characters: Shorter and broader, distinctly more rugose. Pronotum shorter, with the hind angle obtuse, rounded. Elytra scarcely reaching the hind knees. The last abdominal segment with an obtuse angular emargination and a small black tooth in the middle of the hind margin. Supra-anal plate with only one submedian pair of tubercles and another pair at the basal angles. Cerci about twice as long as they are broad, with two obtuse teeth on the lower margin, with the apex obtuse. Coloration of the same general type as in *A. erythropus*, but the elytra with smaller, scattered brownish spots, and the inner side of the hind femora red, only partly blackened along the upper carina.

♀ (paratype). Differs from *A. erythropus* in the same general characters as the male, and, besides, in the deeper and more narrow emarginated subgenital plate, the apex of which is acutangular.

	♂ (type)	♀ (paratype)
Length of body . . .	19 mm.	25 mm.
„ „ pronotum . . .	5	6.5
„ „ elytra . . .	13	15.5
„ „ hind femora . . .	11	15

Type and paratype are in the Hope Department, University Museum, Oxford; they were both captured by Dr. G. A. K. Marshall, at Mahakata River, Gazaland, S.E. Rhodesia, about 5000 ft., 24 ix. 1905.

This new species is not yet represented in the British Museum, where, however, there is one more, probably undescribed, species from Barberton, which I abstain from describing from a single rather unsatisfactorily preserved male.

KEY TO THE SPECIES OF *ANEURYPHYMUS*.

- (2) Head, pronotum, pleurae and hind femora distinctly rugose. Elytra scarcely reaching the hind knees. Hind angle of pronotum obtuse, rounded. Hind femora on the inner side red, only partly blackened along the upper margin. ♂. Last abdominal segment with an obtusangular emargination and a small black tooth in its middle; supra-anal plate with but two submedian tubercles; cerci less than twice as long

as broad, with the apex very obtuse. ♀. Subgenital plate deeply and acutely emarginated, with the apex acutangular.

A. rhodesianus Uvar.

2. (1) Head, pronotum, pleurae and hind femora less rugose. Elytra extending beyond the hind knees. Hind angle of pronotum straight, not rounded. Hind femora on the inner side black. ♂. Last abdominal segment with a round emargination, without a median tooth; supra-anal plate with two submedian tubercles and two short lateral carinulae; cerci about three times as long as broad, with the apex less obtuse. ♀. Subgenital plate more shallowly and broadly emarginated, with the apex more obtuse.

A. erythropus Thunb.

Genus PLEGMAPTERUS M. Fern.

This genus is undoubtedly very closely related to *Euryphymus*, from which it differs only by the obliterated keels of the pronotum; the male of its single species is, however, unknown and it prevents me from defining its relationship more precisely.

1. *Plegmapterus irisus* (Serv.).

1839. *Calliptamus irisus* Serville, Ins. Orth., p. 691, no. 6.

1870. *Caloptenus saturatus* Walker, Cat. Derm. Salt. B. M., iv, pp. 690, 692, no. 34.

1873. *C[alliptenus] (Euryphymus) ferruginosus* Stål, Rec. Orth., i, p. 72, no. 2.

1902. *P[legmapterus] ferruginosus* M. Fernandez, An. Soc. Esp. Hist. Nat., xxx, p. 259.

1902. *E[uryphymus] irisus* M. Fernandez, l.c., pp. 261, 266.

1910. *P[legmapterus] ferruginosus* Kirby, Syn. Cat. Orth., iii, p. 544, no. 1.

1910. *E[uryphymus] irisus* Kirby, l.c., p. 545, no. 8.

1910. *E[uryphymus] saturatus* Kirby, l.c., p. 546, no. 12.

The type of Walker's *C. saturatus* agrees with the description of *P. ferruginosus* Stål drawn by M. Fernandez from Stål's co-type, and there is no doubt that *C. irisus* Serv. is also conspecific with both.

British Museum specimen: Zoolu, 1 ♀ (*Walker's type of C. saturatus*).

PACHYPHYMUS, gen. nov.

Resembling a member of *Oedipodini* rather than *Calliptamini*.

Head strongly rugose. Face vertical; frontal ridge between the fastigium and median ocellum broad, parallel, convex, with the margins raised; below the ocellum suddenly narrowed, sulcate, still more narrowed towards the clypeus. Fastigium of vertex strongly sloping, somewhat concave, slightly broader than long, and distinctly broader than the frontal ridge between antennae; its margins raised and connected with the margins of the frontal ridge. Occiput with radial postocular ridges. Pronotum rugose, very much alike in its general shape to that of species of *Tmethis* of the group *T. gibber* St.; strongly compressed laterally, especially in prozona, which is distinctly shorter than the metazona; its upper surface strongly tectiform, with median keel crested, in prozona dissected in two teeth, in metazona strongly convex and as high as in prozona; hind angle acute; its lateral margins concave. Lateral lobes of the pronotum distinctly higher than long, impressed before the middle; fore margin S-shaped; fore angle obtuse, rounded; lower margin with a very obtuse and broadly rounded angle before the middle; hind angle a little more than 90°, widely rounded; hind margin slightly convex, oblique. Prosternal tubercle with the base very broad, low (scarcely higher than broad), slightly transverse, thick, with the apex very obtuse. Mesosternal lobes twice as broad as they are long; their interspace subequal to one of them. Metasternal interspace one half again as broad as long. Elytra coriaceous, scarcely transparent even in the apical half. Wings strongly infumate, with the inner disc coloured. Hind femora rather narrow, gradually narrowed apically; upper keel in the basal half strongly convex. Hind tibiae with 7 outer and 9 inner spines; no outer subapical spine; all spurs very feebly bent; the inner spurs scarcely longer than the outer ones.

Genotype: *Calliptamus cristulifer* Serv.

C. cristulifer is such a striking insect that it undoubtedly represents a genus distinct from any one known hitherto, and somewhat related, probably, to *Acorypha* Krauss and *Acoryphella* G.-Tos. Its proper systematic position cannot be defined until the male is known.

1. *Pachyphymus cristulifer* (Serv.).

1839. *Calliptamus cristulifer* Serville, Ins. Orth., p. 692, no. 8.

1870. *Caloptenus cristulifer*, var. ?, Walker, Cat. Derm. Salt. B. M., iv, p. 691, no. 30.
 1902. *E[uryphymus] cristulifer* M. Fernandez, An. Soc. Esp. Hist. Nat., xxx, pp. 261, 272.
 1910. *Caloptenus cristulifer*, var (?), Kirby, Syn. Cat. Orth., iii, p. 245.
 1910. *A[crotylus] cristulifer* Kirby, l.c., p. 264, no. 4.

Serville's and Walker's descriptions of the coloration of this species, together with the above generic description, are quite sufficient to identify the species, and I think it superfluous to give its re-description.

British Museum specimen : S. Africa, 1 ♀.

Species of Calliptamini, the generic position of which is not certain.

There is a number of species described by different authors under *Caloptenus* and *Euryphymus*, the correct generic position of which cannot be determined by the descriptions only, and might be cleared up by the study of the types, in the cases where these are available. Unfortunately, many of Walker's types which were in Mr. Lord's collection in Egypt are destroyed, and there is scarcely any hope of clearing up some of his species.

The following species are described by Walker in the Cat. Derm. Salt. B. M., iv, 1870 :—

- Caloptenus testaceus* (l.c., p. 685, no. 22).—Possibly a *Kripa*.
 „ *concisus* (l.c., p. 687, no. 25).—A *Caloptenopsis* ?.
 „ *signatus* (l.c., p. 687, no. 26).—A *Caloptenopsis* ?.
 „ *turbidus* (l.c., p. 688, no. 27).—Possibly a *Thisoecetrus*.
 „ *mutator* (l.c., p. 689, no. 28).—Possibly a *Thisoecetrus*.
 „ *cincticollis* (l.c., p. 689, no. 29).—This is a member of *Euprepocnemini* and conspecific with *Acridium morbosum* Serv., but the genus is uncertain, the male being unknown.*

* See my note in the Journ. Bombay Nat. Hist. Soc., 1921 (in print).

Caloptenus reductus (l.c., p. 713, no. 74).—Hardly belongs to *Calliptamini*.

Several species of Bolivar also cannot be placed in proper genera without an examination of the types; they are as follows :—

Caloptenus nigro-punctatus (Journ. Sci. Lisboa, viii, p. 114, no. 29, 1881).—According to Bolivar (Mem. Soc. Ent. Belg., xxx, 1911, p. 95), belongs to the genus *Cardenius*.

Euryphymus brachypterus (l.c., seg. ser., i, p. 167, no. 166, 1889).—Belongs probably to a new genus close to *Platyphymus*.

Caloptenus obesus (l.c., p. 170, no. 171).—Probably a new genus.

„ *cicatricosus* (l.c., p. 170, no. 172).

One of M. Fernandez' species, described by the female only is also difficult to identify :—

Euryphymus capensis (Actas Soc. Esp. Hist. Nat., ser. ii, t. v. p. 11, 1898; An. Soc. Esp. Hist. Nat., xxx, p. 268, 1902).

Giglio-Tos, also, described one species of *Euryphymus* by the female sex only, and the genus remains unknown :

Euryphymus nodulus (Boll. Mus. Torino, xxii (554), p. 26, 1907).

ALPHABETICAL INDEX.

All names printed in italics are synonyms. All new genera and species described in this paper are marked with an asterisk.

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